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VOL. VII JANUARY 1960 No. 3

THE

INDIAN ECONOMIC JOURNAL

THE QUARTERLY JOURNAL OF

The Indian Economic Association

EDITED BY

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Per Annum: Rs. 15 or £1-5 or $ 4.00 post free.

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PROBLEMS OF ECONOMIC DEVELOPMENT*

I must first of all thank you for the honour you have done me by electing me your President for this year. I am aware of my limitations, but, since you have made your choice, I must accept it with gratitude and try to discharge, as well as I can, the duty you have assigned me. I may only add that whatever I say on this occasion represents my personal views; it has no governmental imprimatur of any sort.

2. I propose to speak to you today on Problems of Economic Development. My first instinct was to search for some theme other than planning or plans, which is my daily preoccupation. But whichever topic I turned over in my mind, it seemed to come back again to the same hard core, viz., developmental planning. After all, what other subject is there in India today in which all of us are deeply interested? In being unable to get away from Planning and development, I am, after all, a typical citizen of this country; this subject is foremost in everybody's mind. I decided, therefore, that the best thing to do would be to go directly to this subject, rather than come to it by a circuitous route, and to place before you such thoughts and observations as occur to me on it in the light, especially of India's plans, their achievements and their shortcomings. This, I am sure, is a difficult theme, and one must approach it with due trepidation.

3. Economic planning is by no means a new subject, but it is only in recent years that it has become the focus of economic thinking. The U.S.S.R. has operated a planned economy for over 40 years now. But, barring a few economists who tried to study this process of developmental planning in the U.S.S.R., most others tended to regard the U.S.S.R. experiment as something of an aberration, perhaps a useful exercise for a few, but of no great relevance to the main body of economic thought. This is not to say that economic thought had not adapted itself from time to time in view of the changes taking place in the economic environment. There had been critics and even heretics, but they were still regarded as a somewhat peculiar type of economists. The Great Depression led to considerable re-thinking and

* Presidential Address to the Forty-Second Conference of the Indian Economic Association at Annamalainagar, December, 1959.

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exploration and development of fresh approaches. The growing interventionism of the inter-war years also pointed to the need to question some of the traditional postulates of economic science. The discovery that imperfect rather than perfect competition was the more general rule in economic relationship reinforced markedly the scepticism expressed earlier by socialist thinkers as to the efficacy of the market mechanism to secure socially optimum results both in terms of production and of distribution.

4. But, not until the exigencies of World War II necessitated a planning of the whole economy for what was called 'total' mobilisation of resources, did economic planning emerge as a way of mobilising and organising resources. The strength and resilience of the U.S.S.R. economy was also demonstrated during the war. With the end of World War II, the old colonial world came finally to an end, and it came to be recognised that the economic problems of the newly independent nations, which had hitherto remained undeveloped or underdeveloped, could not be dealt with satisfactorily within the frame of traditional economic analysis. This is not to suggest that all the earlier economic thinking had no relevance to the new problems of development; far from it. But there was, clearly, need for reorientation. Briefly, with the emergence of economic development as the principal problem of the latter half of the twentieth century, a new dimension has been added to economic thought, and it is important for the students and practitioners of this science to recognise explicitly this basic change.

5. In India, the need for economic planning to secure rapid and balanced development was recognized even before Independence; the first attempt to draw up the blueprints of a plan was commenced some 25 years ago. One could go even farther back; for, in fact, what is sometimes called Indian Economics was not just a protest against *laissez faire* on merely practical or nationalistic grounds. The early pioneers like Ranade were, in essence, trying to reach out to a new system of thought related more integrally to economic and social conditions of an underdeveloped country like India. I think it is only now with the acceptance of a planned economy that the necessary climate for a study of the economic problem from the grass-roots and in all its ramifications, political, social and administrative, has been created. With the growing interest in developmental problems all round, economics, if one may venture to say so, has before it a new period of intense, constructive activity. Even in industrially advanced countries, the implications of economic growth rather than of a balance or equilibrium or circular flow as between the different sectors of the economy are receiving greater attention, and the subject of under-development and how it can be got over is becoming a major preoccupation of economists both in the more developed and in the less developed coun-

tries. In view of the fact that most economies are getting to be more and more of a 'mixed' type, there is now scope for a great deal of interchange of ideas between economists applying themselves primarily to problems of their own economic systems. It would be inexcusable if economists in India were at this stage to continue to think in terms of analytical models or norms of policy which do not quite fit even the economies for which they were originally designed.

6. Although we in India will soon be completing the Second Five Year Plan, we are still only on the threshold of development. The First Five Year Plan was mainly preparatory in character. Its goals were related more to the immediate requirements and possibilities of the economy than to the long term perspective which was outlined in the report of the Planning Commission. The First Plan report discussed in considerable detail various basic issues relating to the scale and pattern of investment and the policies appropriate to the attainment of the defined scale and pattern. It also formulated the lines along which institutional changes should be undertaken in order to promote economic development within a democratic framework. But the Plan itself proposed a relatively small step-up in investment, and most of it was in fields like agriculture, irrigation and power that were already familiar. The Second Plan was conceived as a major step towards industrialisation; it called for resources, both financial and organisational, on a large scale. It was also in this Plan that the goal of a socialist pattern of society was enunciated. The Second Plan ran into difficulties not long after its commencement, and the question is being asked whether the objectives and the priorities chosen were sound. These issues are coming into the forefront at the present time when the Third Five Year Plan is on the anvil. There are few today either among economists or among the wider public who would question directly the need for developmental planning, but it would be too much to assume that this is in all cases anything more than conformity to current fashions or that the implications of this process together with the discipline and the sacrifices that it involves are accepted without reserve, even if fully understood. If developmental planning is to take root and gather strength, it has to be backed by much more than passive or partial readiness to go along.

7. It is necessary in this context to distinguish between growth and development. The process of economic growth can be described in various ways: it can be related to changes in production techniques; or to changes in attitudes to savings and investment; or, again, to the opening up of new opportunities of trade and expansion. These conditions arose in certain countries at a certain stage, and enabled them to move forward from stagnation to economic growth. This came about as a result of several factors; there was hardly any conscious striving for such a situation to emerge. The essence of dev-

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elopmental planning is the creation, within a comparatively short period, of a complex of favourable conditions, so that the economy is lifted out of its ruts and develops fairly soon sufficient motive power to go forward on its own momentum. Developmental planning, therefore, involves coordinated action at various points in the system, and it involves necessarily some adjustment in the balance of social forces within the system. It is for this reason that developmental planning has inevitably a social philosophy (some would call it ideology) besides an economic strategy. For democratic planning to succeed, it is essential that both these, that is, the underlying social philosophy as well as the economic strategy involved are accepted by all sections of the community.

8. I cannot, obviously, attempt here a satisfactory statement of the social philosophy or the economic strategy behind India's plans. The old Indian philosophers tried to expound the nature of reality in terms of "Not that, not that"; and, although that device, too, has its limitations, one could say that India's plans do not aim at creating any set pattern, capitalist, communist or other. The socialist pattern which is described as the objective of our plans is not a rigid or clear-cut pattern. It implies rather special stress on certain values like reduction in inequalities, wide diffusion of economic power and the organisation of local resources, especially the skills and capabilities of the small man, on a co-operative basis in certain fields, but these values are not a unique feature of any particular pattern of economic organisation. India's plans do not seek to build up a system resting solely on private enterprise, but private enterprise has an important part to play in intiating and carrying through the process of development. Nor is the State to be the ultimate owner or dispenser of the means of production. The objective is not to evolve a monolithic system with all economic initiative or power concentrated in the State, but to utilise the State as a principal agency for promoting rapid and balanced development. The entrepreneurial class in India is too small for the tasks of development to be left entirely to free enterprise, and it is the State, acting for the community as a whole that can prevent class conflicts or clashes of group interest that might make orderly development impossible. A steady increase in public investment coupled with economic policy which encourages investment elsewhere in the system, while spreading out at the same time the costs and gains of development fairly equitably, is thus a major part of the strategy of India's plans.

9. What does this enunciation imply in concrete terms? Is it really possible to develop such a "mixed" economy? Is not there a danger of getting the worst of both the worlds? Could we, in a word, in the light of past experience, feel confident about the success of our future plans? These, I think, are crucial questions, and I shall try, however sketchily, to answer them.

10. Let us review briefly the major economic developments since, let us say, 1951 when the First Plan commenced. In these 8 or 9 years, remarkable progress has been made in several directions, and the record of over-all achievement is, by any standards, good. It should not be forgotten that for all practical purposes the First Plan commenced not in 1951 but in 1953. Net fixed investment by the Centre and the States together was Rs. 163 crores in 1951-52; it was Rs. 167 crores in the following year; and, only in 1953-54 was it stepped up to Rs. 208 crores. The community development programme was taken in hand towards the end of 1952. Some of the agrarian reforms were also put through about this time. As compared to Rs. 167 crores in 1952-53, net fixed investment in the public sector would approximate Rs. 763 crores in 1959-60 according to the budget estimates. Even allowing for some shortfall and taking into account the rise in prices, step-up in public investment over the period would be about 4 times. I shall come in a moment to the other side of the medal, but I put it to you that if any one of us had been asked, say, 8 or 9 years ago whether such a thing was possible, most of us, I dare say, would have shaken our heads. I need only recall to you that in the Draft Outline of the First Five Year Plan, published in July 1951, the feasible level of outlay (not all of it investment) was placed at Rs. 1,493 crores for the five-year period with a possible addition of Rs. 300 crores, if circumstances proved more favourable. There has been an impressive increase in the capacity of the public sector to implement programmes of development, and there has been a corresponding acceleration of the people's expectations regarding further plans.

11. It is also no less remarkable that the step-up in investments undertaken by Government has been accompanied by rising levels of investment in the private sector. While one cannot give any precise estimates of private investment, it would appear that the rate of investment in the economy as a whole is at present about 11 per cent of national income, as compared to 5 per cent or so at the commencement of the First Plan.

12. I need hardly go through all the usual indices to bring out the fact that the Indian economy has begun to respond well to the expansionary stimuli of the plans. National income has, over the last few years, risen at an average rate of 3½ per cent, the index of national income (1948-49 = 100) at constant prices being estimated at 134 for 1958-59. The rise in 1958-59 was as much as 6.8 per cent—a fact which ought to warm up those who were inclined to draw pessimistic conclusions from the previous year's figures. The rise in agricultural production since 1950-51 has been of the order of 30 per cent; in industrial production more than 50 per cent. More important than these, the production potential of the economy has been greatly added to. A number of new industries has come up, and, if power can be made

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available sufficiently, there will certainly be rapid progress in this direction in the coming years. Facilities for education and technical training are being rapidly expanded ; so also are medical and health facilities. A new class of medium and small entrepreneurs is coming up, and some of the trading classes in society are turning to industries as their mainstay. Above all, the will to progress is discernible all over the country, and it is not the proverbial conservatism of the farmer or the reluctance of the small industrialist or handicraftsman to adopt improved methods that stands in the way of quicker advance, but the inability of the economy to find a sufficient surplus for investment.

13. It should also be noted that the big step-up in investment that has been achieved has not been accompanied by serious inflationary pressures. The index of wholesale prices is now about 20 per cent higher than in 1952-53 ; so is the cost of living. However much one might regret this, especially for those whose incomes are fixed, it is essential to see this problem in some perspective. A plan of development aims, necessarily, at pushing the rate of investment above what it otherwise would be. It must, therefore, press on the resources available for consumption. The rise that has occurred in prices and cost of living is by no means larger than in other countries. The decline in the internal purchasing power of the rupee between 1948 and 1958 has been estimated at 1.7 per cent per annum on an average. In the same period, the U.S. dollar depreciated by 1.8 per cent per annum ; the British pound by 4.3 per cent ; the French franc by 6.8 per cent ; the German mark by 1.7 per cent ; several European currencies fared worse ; some Latin American currencies registered a precipitous downward plunge. This is not to say that all is well with the Indian economy or with our plans and policies. But there is warrant for going ahead cautiously and with confidence. It is, I think, a mistake merely to compare the real purchasing power of a given volume of income without asking whether the latter has gone up too. National income *per capita* has increased in real terms, and while this over-all average may be poor comfort to those who have not gained either in terms of employment for the younger members of the family or of higher incomes for those already in employment, it is possible to be misled as to the degree of hardship caused if one goes merely by price indices. It is, I suggest, rather in the nature of the development process that the poorer sections of the community stand to gain more from the expansion of employment opportunities than by way of increases in the incomes of those already employed. All this is, of course, not to suggest that rising prices are no evil or that the utmost vigilance in this regard is not called for. But I do wish to submit that stability of prices is no more than an element in economic management ; it is not the sole criterion of its soundness.

14. As against the achievements mentioned above must be reckoned the stresses and strains the economy has gone through. Firstly, although the inflationary pressures have, by and large, been held well in check, it must be noted that the defences against future inflation are today considerably weaker than they were a few years ago. For one thing, people have become inflation-conscious, and there is increasing resistance to price rises, witness, for example, the increases in wages in various industries and the increases in salaries in the public sector that have been found unavoidable. Secondly—and this is partly an extension of the same line of reasoning—the foreign exchange reserves at the disposal of the country have been seriously depleted, and there are, in fact, sizeable external obligations to be met in the Third Plan period. Thirdly, despite the large outlays on irrigation, community projects and national extension, and other items of agricultural improvement, the response of agricultural production has been below requirements. And, fourthly, one may add that there is a growing feeling—whether warranted or not—among considerable sections of the community that the limits of taxation have been reached, and that there is not much to hope for from this source for financing the Third Plan.

15. The implementation of the Second Plan, in other words, involved difficulties both in regard to internal and to external resources. Does it not follow, it is asked, that the Third Plan should avoid the mistakes of the Second and pitch its ambitions well within the limits of available resources ?

16. The question, then, is how we assess the experience of the Second Plan. Were the difficulties of that Plan inherent in the scale and pattern of investment adopted ? Or, were there other elements in the situation which could explain these difficulties at least partly ? These are questions which go to the very root of developmental planning, and difficult as they are an answer to them has to be attempted, if we are to make the right decisions in regard to the Third Plan.

17. In making this appraisal, one preliminary point needs to be cleared up. If the assumption is that developmental planning is good only in so far as it can be carried through without any perceptible sacrifices, if, in other words, the view to be taken were that there is no urgency about the problem which makes sacrifices worthwhile, almost any plan can be shown to be overambitious. But, this, let it be recognised explicitly, has never been the assumption behind India's plans. The First Plan stated the issue squarely: if we desire to maximise the rate of growth of the economy over a period, there is no alternative to foregoing an increase in consumption in the near future. We have had before us, throughout, a certain long-range perspective, viz., the doubling of per capita incomes within a period of twenty-five

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years or so. The First Plan aimed at strengthening the groundwork. The Second Plan had necessarily to provide for a scale and pattern of investment that would correct the lopsided development of the economy so far and enable the country to progress more rapidly in future. In envisaging a national income increase of the order of 5 per cent per annum on an average and an increase in investment from some 7 per cent of national income to about 11 per cent, the Plan did not, by any means, set up a goal which could be considered over-ambitious. Nor would it be correct to argue that the step-up in investment in the dynamic sectors of the economy like industries, power, mining and transport was excessive. In any case, those who bewail the insufficient rise in national income and employment cannot, at the same time, complain of the over-ambitiousness of the Plan. It was not, I suggest, either in respect of the size or the pattern of allocations to various heads of development that the Second Plan went wrong. I should even put this more positively and say that the basic objectives and priorities of the Second Plan were right and sound.

18. Could the same be said also about the scheme of raising resources? This, it must be admitted, is a question that does not admit of a categorical answer. For the outlay of Rs. 4800 crores in the public sector,—and it is the financing of this outlay which is relevant in the present context—the Plan envisaged deficit financing of Rs. 1200 crores and had still an uncovered gap of Rs. 400 crores. That this scheme was not quite satisfactory was stressed in the Plan report itself. The scheme, as outlined in the Plan report, provided for no public savings to finance the investment programme proper, which had consequently to be financed by a draft on private savings. That the tax target in the Plan was too low become evident within the very first year of the Plan, and substantial new taxation was put through in the course of 1956-57 and in 1957-58. The five-year yield of the additional taxes imposed by the Centre and the States is expected to be over Rs. 900 crores. But, even so, and despite the larger external assistance than was originally estimated, the resources available for the public sector plan have been short.

19. The shortage of internal resources which figured so prominently in the plan discussions in 1958 could not possibly be ascribed to lack of tax effort. It arose partly from the difficulties of the capital market, which suffered what looks like a psychological setback. The budgetary deficit in 1957-58 turned out to be the highest on record—about Rs. 500 crores—partly because the borrowing programmes of the Centre and the States fared badly. There were also some other factors in the situation, for example, the non-receipt into the budget of the expected P.L. 480 funds, the effect of which was to magnify the budgetary deficit for the year. The capital market has recovered since then, and the receipts from public loans in the subsequent years have been

good. This improvement and the larger receipts of external assistance account for the substantial drop in deficit financing in 1958-59 to Rs. 156 crores.

20. The major difficulty was, undoubtedly, the foreign exchange gap. The drawing down of sterling balances in the very first year of the Plan was Rs. 221 crores, and in 1957-58 it rose to Rs. 260 crores. By September 1959, the decline in these balances had added up to Rs. 567 crores. The Plan had envisaged a drawing down of these reserves by not more than Rs. 200 crores. It is evident that the foreign exchange requirements of the Second Plan had been seriously under-estimated, and the phasing of imports by the private sector was not properly planned. It must be emphasised, however, that given the size and structure of the Plan, there was much to be said for as early a start as possible with the major foreign exchange consuming projects, and the emergence of acute foreign exchange difficulties in the earlier part of the Plan is not something we need regret, considering that the projects would, but for this, have been correspondingly delayed. To put it in another way, let us suppose we had foreseen correctly the foreign exchange requirements for the Second Plan period. Would we have then come out with a different kind of plan? We would, I dare say, have been better prepared both in respect of the effort to be made for securing the necessary quantum of assistance from abroad, but it is, to say the least, doubtful if we would have been justified in that event in altering the scale and priorities of the Second Plan in any significant degree.

21. All this, however, does not alter the fact that the task of mobilising the resources needed for the Second Plan has proved difficult, and that whatever view one might take regarding the past, inadequate response of resources to the growing needs of the economy is a problem which calls for careful and urgent consideration. Behind the estimates of resources for the Second Plan, the assumption was that a substantial proportion of the increases in national output year after year would be directed to investment rather than to consumption; in other words, that savings in the economy, as a proportion of national income, would increase progressively. The data on savings are very inadequate, and it is difficult to assess the actual trends with any precision. But it is evident that the step-up in investment that has taken place in recent years has depended largely on the use of foreign exchange reserves and on external assistance. Broadly speaking, while the rate of investment in the economy is now around 11 per cent, the rate of domestic saving is around or even a little below 8 per cent of national income.

22. It will be agreed, I take it, that the Third Plan should provide for a significant step-up in investment. For one thing, the

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rate of population growth has gone up and this means that the investment required even to maintain per capita incomes will be larger. Secondly, there is a large backlog of unemployment and under-employment which should be reduced to the extent possible. The number of fresh entrants to the labour force will be obviously, larger than in the Second Plan period, and the employment target should, at a minimum, provide for absorbing them. Thirdly, it has to be borne in mind that the greater the acceleration of investment and incomes in the Third Plan, the easier it will be in the succeeding plans to raise the resources required for futher development. Per contra, the smaller the investments in any particular period and the lower the rate of growth of national income, the more difficult becomes the task later of a further stepping-up of these. On these considerations, the estimate of Rs. 9900 crores of investment for the Third Plan given in the Second Plan report is, if anything, on the low side.

23. But, of course, a plan can be only as big as the resources that can be found for it, and what I wish to urge is that there is need for the boldest possible effort in this respect on every relevant consideration. It is convenient upto a point to examine the practical possibilities of such an effort in financial terms. How much, for example, can be raised by taxation? Or, what is likely to be the scope for raising loans and small savings? Or, again, to what extent would it be safe to rely on deficit finance? These are pertinent questions, and they have to be answered carefully, if one is not to be misled by *a priori* type of reasoning, in terms of the overall increases in income and the overall savings effort involved. The fact is that each device of mobilising financial resources has its practical limitations. At a certain stage, taxation can be inflationary, certain types of borrowing are inflationary, and there are certain types of resources such as foreign exchange, which are, to an extent *sui generis*.

24. Basically, the resources required for developmental planning are real resources, that is, labour—not only unskilled but also technical and managerial labour—raw materials, equipment and the like. A plan is a statement of what projects are to be taken up in the public and in the private sectors and what they would involve in terms of these real resources. To the extent that there are deficiencies, can they be overcome by increasing domestic production in certain lines, and are the wherewithals for such increases available in the system? Further, since capital goods and equipment of several types would have to come from abroad, can the necessary foreign exchange resources be secured? This, of course, does not exhaust the types of balances to be worked out. There is another major balance to be seen, viz., whether there will be food and other consumer goods enough to match the increased incomes created through investment. The literature on economic development is replete with the tools and techniques that might be

employed for setting out these relationships in the right perspective, and I think it is fair to say that our understanding of these planning techniques has grown considerably in the last few years. The problem here is to ensure in practice that the demands and supplies of products and factors keep moving forward in balance. This depends, to a great extent, on the efficiency or excellence of the administrative and organisational arrangements for implementation of plans.

25. It is axiomatic that if certain targets are attainable in the concrete, that is, if the necessary raw materials, equipment and know-how are available—not as viewed separately by each project-making authority in terms of what it will cost to secure these at the going prices but in their totality, there should be no difficulty in finding the necessary finance for achieving these targets. It is on this— theoretically unimpeachable—logic that those who feel dissatisfied with the financial approach advocate the approach in terms of real resources —rather wrongly called physical planning. While no one can deny the validity of the argument that what is physically possible should be financially feasible, a careful economist cannot stop at this. He is bound to ask whether the techniques of assessing these physical possibilities are so certain or well-established that they can be relied on to give an answer that will be borne out by the actual course of events as one proceeds to implement plans on this basis. I do not wish to suggest the existence of a controversy where there may, in fact, be none. But it is legitimate, I suggest, to question the soundness of the calculations of these balances in terms of real resources, if with all the examination and study one can make of the possibilities of raising financial resources, one finds these latter inadequate for meeting the costs of the programmes in question. One should not dismiss the possibility in such an event that either the so-called physical resources do not exist, or that in any case, they are not capable of being mobilised through the techniques that the community is prepared to accept. After all, Kautilya was not wrong when he said: "All undertakings depend upon finance."

26. It is not my intention in this address to suggest what the size of the Third Plan should be or how, in concrete terms, the resources required could or should be raised. That, obviously, is a task which the Planning Commission alone is competent to undertake. But there are a few points which deserve to be made in this context. First, that resources are not some fixed, pre-existing quantity the magnitude of which one has somehow to estimate before deciding on the plan. Resources grow as investment proceeds. The pattern of the Plan, that is, the distribution of outlays and the time-schedule for completing the different projects are as relevant to the problem of resources as the size of the Plan itself. Second, that a developing economy must be prepared for saving an increasing proportion of the

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increased incomes generated in the process of development, and since, in the situation in which it is placed, the public sector has to undertake large entrepreneurial responsibilities, ways and means must be found of enlarging public savings progressively. Aversion to taxation and reluctance to make profits from public enterprises are out of place in this context, and all discussion of the limits of taxable capacity and the like can proceed meaningfully only if their objective is to maximise the aggregate of surpluses available for investment. Export promotion has also to be viewed as an aspect of this overall problem of creating the necessary surpluses in the economy.

27. I should now spell out these points, though not in any great detail. The first point is pretty obvious. The amount of resources that can be drawn upon is not independent of the rate at which the resources are growing, and since the first hurdles are always the most difficult to cross, a country which is still in the early stages of developmental planning should think in terms of a scale of effort that will achieve the break-through. Too little in the matter of developmental effort is no less likely to fail than too much of such effort. Having said this, however, I should add that resources available for investment grow only as the various projects get completed and come effectively into production, and a plan which is excessively weighted with long-maturing schemes does not, during this period, create resources which could be utilised either for consumption or for further investment. The bigger the Plan, in other words, the greater has to be the balance in the pattern of investments.

28. And yet, one must not forget that a balanced pattern is not easy to define. The process of development involves investments which have in view the requirements of the economy at varying points of time, and the balance does not depend wholly on what decisions are taken today but on the decisions that will be taken in the course of several years to come. The balance has, in other words, to be linked to the perspective of development we have in mind. This is why some economists have suggested that the planning authorities must make each year a plan for the next five years, so that the developments that actually take place from year to year are checked against the goals, and the latter, in turn, adjusted to the new emerging requirements of the economy. It is significant that in the discussions on the objectives of the Third Plan has figured an item that was not stressed so explicitly in the earlier plans, viz., the attainment as early as possible of self-sustaining growth. This term—self-sustaining growth—is capable of being interpreted in various ways. Basically, I suppose, it connotes the stage at which the economy is in a position to provide sufficient savings for sustaining the investment programmes essential for a reasonable rate of growth thereafter. What rate of growth is to be postulated from that stage on, and at which levels of income

"spontaneous" savings are, in fact, likely to come up to the mark are questions to which it is possible to give different answers. Some recent writings on the subject seem to convey that this self-sustaining state is likely to be associated with the attainment of a certain rate of investment, say, 10 per cent, of national income. This seems to me a doubtful hypothesis; I should think not only that a higher rate of investment than this would be required for "take-off" to be achieved, but also that very much depends on the level and structure of incomes in the community. At the same time, it is evident that, despite all that one can postulate about the possibilities of exchanging a country's surplus in whatever form with whatever it needs from abroad, the attainment of a state of self-sustaining growth is, in practice, closely linked to the capacity of a country to turn out a significant proportion of the capital goods and equipment it needs. From this point of view, the larger the proportion of its total investible resources a country devotes to the making of capital goods and equipment, the greater will be its growth potential and the quicker, therefore, its progress towards self-sustaining growth. A balanced pattern of investment is, thus, not one that can be worked out in terms of the last few years' levels of demand and supply; nor is it a pattern that necessarily proceeds from consumption goods to capital goods and then to the manufacture of plant and equipment needed for these.

29. On the other hand, little argument is needed to show that if the country in question was not in a position to meet the growing demand for food arising in consequence of the investments undertaken, there will develop leakages in the system which may make the economy anything but self-sustaining. What limits the size of a plan, that is, the magnitude of the investment effort that can be made—investment in what are called the "more remote" stages of production like machines to make machines is simply investment effort sustained over a fairly long period—is the capacity of the system to increase within a relatively short period the supply of consumer goods needed while the growth potential of the economy is being built up. In a country like India where the bulk of the new purchasing power gets spent on food, the elasticity of supply of food is the major determinant of the pace of progress. If this sector lags behind, the calculations, both of internal and of external resources, available for the Plan cannot but go wrong. The paramount need for a big leap forward in this direction is so well-understood that it is almost unpardonable to stress it further. All one need say is that the acceleration of investment in the Third Plan will depend primarily on the success we achieve in this direction. First, food has to be produced; second, more of it has to be made available for the sustenance of those whose incomes increase—or, in fact, of those who get employment and income for the first time. Not only food but also agricultural raw materials are basic to development. What is needed, therefore, is an increase in agricul-

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tural productivity as a whole. This is the major balance that must be ensured, and it involves not only investment but a great deal of organisation. The resources for planning depend primarily on the success that can be achieved in this respect.

30. This brings me to my second point, viz., the mobilisation of domestic resources on an adequate scale. This is a vast subject, and the scope and limitations of various possible techniques of mobilising resources for development have been discussed a great deal—and competently—both in this country and outside. I need, therefore, make only a few observations on the subject. Since domestic resources are at present barely adequate to maintain the existing scale of investment, the problem of resources in respect of the Third Plan will, undoubtedly, be a difficult one and every possible source for securing the required quantum of resources will have to be utilised. There are, fortunately, some favourable factors. The investments made in industry, power and transport over the last few years are beginning to bear fruit, and they represent additions to national output from which a part of the surpluses needed for investment could be obtained. The same holds for some of the projects that might be completed in the course of the Third Plan. The means of capital accumulation are the same in capitalist and in socialist (or mixed) economies : an increasing proportion of the surpluses generated has to be ploughed back into investment. For enterprises in the private sector, this has always been recognised as sound policy, though in practice, there is often a tendency to raise or keep up dividends even at the cost of reducing retained profits. In so far as these dividends accrue to classes who are more likely to reinvest them rather than use them up for consumption, no harm is done on balance. But it would be wasteful of effort if the public sector were to shirk initially the responsibility for building up the necessary surpluses through suitable pricing policies and then to look for devices to get them back into its hands through what can only be circuitous and costly ways. Too often does public investment tend to be regarded as just so much essential expenditure ; too often is there a tendency to forget that unless the investments made in the past bring back adequate returns, the task of providing fresh resources for further plans cannot but prove self-defeating. While recognising that public investments cannot all pay, and that they are not all taken up just in order to secure high returns to the exchequer, it is essential, over a period, to ensure that public investment funds have to be developed on a revolving basis. This is possible only if public enterprises earn adequate profits, which, of course, call for both economies in cost and suitable pricing of the goods or services produced.

31. Some of the modes of raising financial resources for the public sector, such as, borrowing, small savings and the like do not evoke much public debate, although even here there are delicate points of

policy, such as the role of interest rates, the management of public debt, and the right relationship between credit for the public sector and credit for the private sector. These, one could say, are issues in day-to-day monetary management, our record in respect of which has been excellent. But the question is asked whether taxation can be raised in the Third Plan period and how far. There have been large increases in taxation in the course of the Second Plan, and it cannot be said that the problem is easy of solution. Few would expect that the Third Plan could be seen through without a further tax effort of a sizeable order.

32. The difficulty of the situation in this regard arises from the fact that the Indian tax system does not automatically bring into the public exchequer a constant proportion of national income. As the latter increases, tax yields go up only less than proportionately, so that fresh taxation becomes necessary even in order to maintain the ratio of tax receipts to national income at a given level. This is mainly because increases in agricultural incomes do not produce a corresponding increase in the tax yields from that sector. Land revenue is almost completely inelastic and even commodity taxation does not reach the rural sector quite as effectively as it reaches the urban sector. All this, it must be admitted, reflects basically the low level of incomes of the majority of the population and the correspondingly low margin available for taxation. Nevertheless, a comprehensive development programme cannot be financed without calling for sacrifices from all sections of the people. There is, from this point of view, a case for a further increase in the coverage of taxation. Direct taxation of the agricultural sector seems a great hardship if one assumes that incomes in that sector do not go up significantly. If, on the other hand, the expectation that in the Third Plan agricultural output will increase substantially materialises, there is no reason why a portion of these increases should not be drawn back into the public fisc. Direct taxation in the urban sector might bear some selective and marginal increases, but the bulk of the additional tax resources for the Third Plan will have to come from increases in indirect taxation, involving both an increase in the coverage of these taxes and a step-up in the rates in respect of some commodities that are already subject to tax. The proportion of total tax revenue to national income went up from about 6.6 per cent in 1950-51 to about 8.3 per cent in 1958-59, the bulk of this increase being accounted for by the imposition of new taxes and by increases in the rates of existing taxes. On a rough estimate, this proportion would go down to 7.6 or 7.7 per cent by the end of the Third Plan if no additional taxation were imposed. The need clearly is to increase this proportion from 8.3 per cent to somewhere between 10 and 11 per cent.

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33. Is not indirect taxation, it will be asked, inflationary? My answer would be that it is not, if the overall fiscal and monetary discipline in the system is fairly rigorous. If, on the other hand, the increases in the cost of living brought about by excise duties, sales taxes and the like were to become the basis of corresponding increases in wages and if, further, this were to be accompanied by liberal credit creation, the consequences cannot but be inflationary. This is where the overall discipline of the system I just mentioned comes in. The rationale of indirect taxation is that it cuts down consumption of the commodities in question by raising their prices to the consumer. If the consumer is thereafter to be compensated for this cut, the initial tax effort cannot but be negated. This, then, is one of the many hard choices that a community has to accept rationally. The development process benefits various sections of the community in various ways Some gain because of increased employment; some through higher incomes; some on account of the improvement in economic and social overheads. It is, however, virtually impossible to avoid hardships to some classes and the question ultimately becomes one of what priority the community attaches to development itself. Questions like the limits of taxable capacity and the desirability of redistributive taxation impinge on this wider issue and have, in fact, to be related to the basic decisions taken in regard to the size and content of the development plan itself.

34. Taxation in a democratic set-up presents difficulties, and one must admit that in this respect the authoritarian systems have an advantage, in that they are able to adopt practices for securing the required funds for capital accumulation by arrangements which amount to a deduction from the real income of the wage earner or the consumer at the very source. This is why, in fact, it is sometimes argued that developing economies should go over to an authoritarian system; a completely socialised and non-democratic system, it is contended, is technically more efficient than a mixed economy. This is, obviously, a *non sequitur*, and, in any case, ends and means cannot be viewed in isolation from one another. It is possible—and, doubtless, desirable—even in a democratic set-up to encourage institutional saving through companies, co-operatives and the like, but a democratic community has to be persuaded to accept the sacrifices involved by way of higher taxation and other restraints on consumption. The initial steps in development within a democratic framework are more difficult, but so are the first stages of organising such a community for war. Given, however, the necessary social cohesion, leadership at all levels, and a pervading sense of urgency, the tasks can be accomplished. At this point, one is close to the area of decisions which also involve considerations other than economic. All that an economist can say is that acceleration of investment effort such as the Third Plan may be expected to envisage must involve an adequate scale of domestic effort at raising

resources, and this has to be achieved not only through the usual fiscal devices, but also through suitable changes in the institutional structure —compare, for example, the changes in the agrarian structure envisaged in our plans—which reinforce and strengthen the urges for harder and more efficient work and consequentially for more capital formation.

35. Before I leave this subject of resources, I should add that a developing economy is bound to need a substantial inflow of external resources for some time. How much of such resources would be needed and for how long is a question as difficult to answer as the one which I touched upon earlier as to the rate of investment that an economy must reach for achieving the "take-off." But it will be of interest to note that according to a recent estimate, the order of annual inflow of foreign capital necessary in the non-industrialised (non-oil producing) coutries of the world for enabling them to secure an increase of 4 per cent per annum in their national income—by no means a high rate of increase—comes to $15 billion a year. As compared to this, the flow of resources to these countries amounted to less than $4 billion a year on an average over the last few years. The problem cannot, of course, be looked at solely from the point of view of the needs of the underdeveloped countries; the availability of surpluses in the more advanced countries is a no less relevant factor. One of the most heartening features of the post-war period has been the growing readiness on the part of the industrially advanced countries to play their part in helping this process, and international agencies like the World Bank have mobilised substantial sums for investment in economic development. The prospects for an increased flow of private investment to countries that are hungry for capital and have the necessary environment of economic and political stability are also promising. But there will be need, for several years to come, both for an enlargement of the flow of resources from international agencies and on a government-to-government basis.

36. An important problem that arises in this connection is the burden of repayments of the liabilities the recipient country thus incurs. It is evident that the capacity for repayment grows relatively slowly, for, while the demands for machinery, equipment and raw materials required to accelerate the tempo of development, tend to grow more rapidly than the import-saving resulting from the increased domestic production consequent on the investments that have been made, the export potential develops only after a time. Some of the countries that developed in the nineteenth century had the advantage of being able to revolve their external obligations by recourse to the international capital market. Whether this situation can be re-created, it is difficult to say. But it is clear that to the extent development has to be financed by loans from abroad, the maturity pattern of repayments has

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to be matched to the growth in domestic production. If follows also that developing countries would do well to finance some of their projects through equity capital from abroad.

37. In the final analysis, however, the question is how far domestic consumption can be restrained and an export surplus built up. It would be anomalous if the external resources that come in initially to further the process of development should create liabilities which a developing country can meet only by slowing down development. This is a problem, in the main, of the terms on which such assistance could contribute best to the fulfilment of its essential purpose. The fact, nevertheless, must be faced that large and progressive increases in exports are vital for preservation of the climate so essential for continued inflow of resources from abroad. A well-worked out programme for exports will thus have to be an integral part of the Third Plan. This problem has many aspects : the exploration and study of the possibilities of new markets abroad and the further development of established markets, the building up of suitable export organisations, arrangements for strict quality control and maintenance of the right relationship between domestic prices and world prices. But it is axiomatic that to the extent the claims of domestic consumption impinge on export prospects, the latter should have precedence.

38. In my presentation so far, I have not dealt specifically with the problem of unemployment and underemployment, because the major part of the answer, I believe, has to be sought in terms of increased investment, which has been my main theme. It is only by increasing the supply of tools and equipment per head of the working force that the total output of the community can be raised and the demand for labour pushed to higher levels. What limits, within a given time-span, the expansion of employment is precisely the factor that limits investment, viz., the availability of food and other consumer goods. Viewed this way, the problem of unemployment is but a facet of the problem of investment. It cannot, however, be argued that this is a complete answer to the problem. The abundance of labour relatively to capital enters into the choice of the investment pattern ; it would, obviously, be wasteful to use capital to do jobs which labour could do equally well. Even allowing for the fact that factor proportions might not be capable of large variations in certain types of production, there is a case for inclusion in any development plan of a number of schemes or projects which are labour-intensive. One could also justify a measure of temporary subsidisation for outputs of labour-intensive types of enterprises on the basis of some saving one could postulate on the social cost of unemployment. This idle manpower in the system is spread out all over the country, and one cannot assume complete mobility of labour, regionally or occupationally. Jobs have,

therefore, to be brought to the men, to the extent possible, and they have to be such as can be performed without extensive re-training.

39. The problem, obviously, is one which calls for a great deal of local organisation, besides a general step-up in investment. The employment potential of a plan is a function not only of the size of the Plan, but also of its content. To what extent idle manpower can be used with success is a question that has, therefore, to be answered mainly in terms of the effectiveness with which local developmental activities can be organised. Idle manpower is, undoubtedly, a resources and it must be utilised. Economists at one time felt cheered by the thought that in the consumption of the unemployed there was already a latent source of saving which could be drawn upon extensively. This, however, is not warranted by experience, and it is difficult, in a democratic set-up, to pay the labour being employed for the first time very much less than the prevailing market wage. The conclusion that emerges is that utilisation of the idle manpower available should be an important consideration in developmental planning, although whether the contribution from this source can be large, say, some hundreds of crores of rupees, is doubtful.

40. I might mention in this connection that the recent spurt in the rate of population growth is a trend which cannot but cause concern. This is so, despite all the revolutionary developments in science and technology. It is hardly necessary for me to argue elaborately on this point ; I see no escape from recognising the fact that uncontrolled population growth does not go well with planned development and the more intensive the measures to popularise family planning, and the greater, therefore, the progress towards limitation of the numbers, the better would be the prospects for rapid economic development. Thinking in terms of five year plans is an excellent device for stimulating effort in some directions, but one wonders whether the focussing of attention on such limited periods of time, during which the changes that can be brought about in the trends of population growth cannot be spectacular, does not inhibit the pursuit of vigorous measures in this particular case.

41. Why in this particular case alone ? Excessive preoccupation with the particular five-year period can be a handicap in almost all developmental planning. It might, for instance, delay the preparation, sufficiently in advance, of well-drawn up projects such as must necessarily be taken up in the next plan period, and cause, consequently, a lag in investments when that plan commences. There might be, to take another example, a temptation to assess the claims of education and technical training for vitally needed personnel in terms only of the immediate requirements. It takes, according to the experts, some 7 or 8 years at a minimum to secure the full utilisation of the irrigation

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potential of a major scheme, which means that these major works must be planned much ahead of the increases in outputs desired. Planning is a continuous process, and we should have before us, at each stage in the process, a view of the longer-term perspective. Each plan tapers off into another, and the less of a hiatus there is between one plan and the next, the better. Tasks like mobilisation of domestic resources or shaping up the country's balance of payments or increasing food production need also to be viewed similarly as continuous; in these matters, each step that is taken now brings the economy nearer to the attainment of its objectives. There is no great merit in relating targets and achievements in these spheres to particular five-year periods.

42. This brings me to the end of my task. Developmental planning is a fascinating problem, and many aspects of it get revealed only as we go along. Planning in a democracy and within a system that relies on the functioning together of a public sector and a private sector and uses various techniques, like exhortation, incentives as well as regulation and control, for achieving the desired rate and pattern of development presents inevitably difficult problems of choice. Economic policy in this context involves a delicate balancing of conflicting considerations. But there is, in this type of planning, scope for pragmatism and adaptation such as might not be possible in the more rigid patterns of development. It is in this situation that the economist has a particularly important role to play not only in laying bare the inter-connections between the different parts of the economy, but in presenting as clearly as possible the implications of alternative courses of action. Economics comes into its own only when there is a multiplicity of ends and a choice between means, and democratic planning in a mixed economy offers these choices perhaps better than any other system. It is for the economist to meet this challenge. Some twenty-five years ago, Keynes warned some of his fellow economists not to play the role of Euclidean geometers in a non-Euclidean world. It is, I think, the merit of the established tradition in Economics that while it recognises the need for abstract and rigorous models for purposes of analysis, its practitioners have always felt it essential, while enunciating or commenting on policies, never to lose their sensitivity to the changes in the socio-economic environment. This is a tradition we should cherish.

Annamalainagar J. J. ANJARIA

STRIKES AND PUBLIC POLICY—INDIA AND THE U.S.A.

THE United States economy is characterized by its reliance on the free market mechanism in the making of basic decisions about prices and output. The level of wages and the type of working conditions in basic industries is determined by collective bargaining between employers and strong unions. In India, on the other hand, the level and direction of national output is influenced by national planning. A system of governmentally-sponsored compulsory adjudication supplements or supplants collective bargaining in the setting of wages, hours and working conditions. In the United States, the strike is accepted as a weapon of labour to be used to accomplish its ends; in India government does not hesitate to intervene to prevent or stop a strike.

The purpose of this article is to detail the relative strike experience in the two countries and to examine the basic elements of public policy towards strikes in both countries. The U.S.A. and the Indian attitude towards use of the strike weapon will be discussed and questions will be raised as to whether the public policy towards strikes in India is accomplishing its objectives.

Comparison of the Work Stoppage Statistics in India and the U.S.A.

There are obvious difficulties in comparing the frequency and magnitude of strikes, lockouts, or work stoppages, in the two countries.[1] In both, the statistics are based upon voluntary reports of work stoppages, and in neither of them is the claim made that each and every stoppage finds its way into the tabulations. Some stoppages are undoubtedly overlooked, and of those which come to the attention of the respective bureaus, coverage is confined to stoppages involving six or more workers which last a full shift or longer, and which are the result of an industrial dispute. The problem of separating the political or general social protest from the industrial dispute is probably more serious in India than in the U.S.A. where almost all stoppages occur because of some labour-management difficulty.

[1] The strike is sometimes regarded as the weapon of labour and the lockout as the weapon of management, but this may involve faulty reasoning. The essential difference between the strike and the lockout is only the difference in the party which initiates the action. The difficulties involved in distinguishing between a strike and a lockout have led the statistical agencies of most countries to abandon the distinction, and to talk instead of work stoppages, a term which embraces both the strike and the lockout. In most instances, it is the union which is the asking party in industrial relations and hence it is the union which usually initiates the aggressive manœuvre. Management's response is usually not to resort to lockout, but to resist the strike, to refuse to accede to the demands and to hope that the workers will return to work on management's terms. In this article, the terms strikes and work stoppages will be used interchangeably; both are meant to cover lockouts as well.

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Table I (p. 255) shows the number of disputes, the number of workers involved, and the number of man-days idle, in both countries from 1946 to 1958. With a much larger industrial labour force, it is expected that the magnitude of these figures will be greater in the United State ; however, the over-all trend is worth examining. The immediate post-war years were a turbulent period in both countries. In the United States labour was freed from wartime controls immediately at the end of the hostilities and the parties to the industrial bargain became deadlocked in struggles to determine their relative post-war positions. A record number of 4,985 stoppages took place in the U.S.A. in 1946. These involved 4,600,000 workers and resulted in 116,000,000 man-days of idleness, 1.43% of the estimated working time of all workers. It was this wave of post-war strike activity which accounted for the willingness of the Congress to pass the Taft-Hartley Act over the bitter opposition of organized labour.

In India both 1946 and 1947 were years of high strike activity. The largest number of stoppages and man-days idle occurred in 1946, but the number of workers involved was at its peak in 1947. The Indian Industrial Disputes Act, passed in 1947, continued the pattern of compulsory adjudication which had prevailed during the war under Rule 81-A of the Defence of India Act. India, of course, had to contend not only with the post-war readjustments but also the unsettled conditions because of Independence and partition.

In both countries, strike activity declined after 1947. If the average number of man-days of idleness during the three years, 1946, 1947 and 1948 is taken as equal to 100, the index number of man-days of idleness in the United States declines fairly steadily in the ensuing years. The prominent exception occurs in the year 1952 when a prolonged strike took place in the basic steel industry. In the U.S.A., the 1949 index number is 82, the next year it is 62.98 and in the following years (with the exception of 1952), it hovers between approximately 36 and 54. The fluctuation is due, in part, to the tendency to negotiate collective bargaining agreements which last for more than one year. Stoppages tend to be greater in those years in which the significant nation-wide agreements come up for renewal. The cycles in over-all business activity also influence the number of work stoppages which occur each year.[2]

In India, the decline in the number of man-days idle after 1946-1948 was more abrupt than in the U.S.A., reaching an index number of 53.34 in 1949. With the exception of the one year of 1950, the

[2] For an examination of the relationship between strike activity and business cycles, see : Albert Rees, " Industrial Conflict and Business Fluctuations," in Arthur Kornhauser, Robert Dubin, Arthur M. Rose, *Industrial Conflict* (New York :McGraw Hill Book Co., 1954) Chapter 15.

TABLE I

Work Stoppages in India and the United States, 1946-1958.

Year	*No. of Disputes*		*No. of Workers Involved.*		*No. of Man-Days Idle.*				
					India		*U.S.A.*		*U.S.A.*
	India	*U.S.A.*	*India*	*U.S.A.*	*Actual No.*	*Index No. 1946-1948 =100*	*Actual No.*	*Index No. 1946-1948 =100.*	*Percent of estimated time of all Workers.*
1946	1,629	4,985	1,961,948	4,600,000	12,717,762		116,000,000		1·43
1947	1,811	3,693	1,840,784	2,170,000	16,562,666	100	34,600,000	100	·41
1948	1,259	3,419	1,059,120	1,960,000	7,837,173		34,100,000		·37
1949	920	3,606	685,457	3,030,000	6,600,595	53·34	50,500,000	82·00	·59
1950	814	4,843	719,883	2,410,000	12,806,704	103·50	38,800,000	62.98	·44
1951	1,071	4,737	691,321	2,220,000	3,818,928	30·86	22,900,000	36·68	·23
1952	963	5,117	809,242	3,540,000	3,336,961	26·97	59,100,000	95·94	·57
1953	772	5,091	466,607	2,400,000	3,382,608	27·33	28,300,000	45·94	·26
1954	840	3,468	477,138	1,530,000	3,372,630	27·25	22,600,000	36·20	·21
1955	1,166	4,320	527,767	2,650,000	5,697,848	46·05	28,200,000	45·78	·26
1956	1,263	3,825	734,168	1,900,000	7,136,512	57·68	33,100,000	53.69	·29
1957	1,630	3,673	889,371	1,390,000	6,429,319	51·96	16,500,000	26·78	·14
1958	1,524	3,694	828,566	2,060,000	7,797,585	63·02	23,900,000	38·80	·22

Source : International Labour Organization, *Year Book of Labour Statistics*. 1957. *Indian Labour Gazette*, June, 1958. June, 1959, U.S. Department of Labor, *Monthly Labour Review*, May, 1958, June 1959.

(1) Figures for India are based on voluntary reports covering all work stoppages due to industrial disputes involving six or more workers. Differences in coverage prevent strict year to year comparability. See, " Industrial Disputes in India During 1958," *Indian Labour Gazette*, June 1959.

(2) Figures for U.S.A. are based on all work stoppages lasting one full shift or longer and involving six or more workers, which come to the attention of the Bureau of Labour Statistics. See U.S. Department of Labour, Bureau of Labor Statistics, *Techniques of Preparing Major BLS Statistical Series*. December 1954, Chapter 12.

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index declines still further through 1954. In 1955 a sharp rise is noted, and with the exception of a minor decline in 1957, the rise continues through 1958. For the most recent years, 1955-1958, the index is at approximately twice the level it was during the intermediate years, 1951-1954. This contrasts with the situation in the United States where no sharp upward trend in the number of man-days idle is visible in recent years. In both countries, however, the indexes remain below the levels of the immediate post-war period.

The decline in strike activity after the war period in India has been attributed to the passage of the Industrial Disputes Act, 1947 and the Industrial Truce Revolution of the same year.[3] A look at the statistical record can neither prove nor disprove this assumption, but it is worthy of note that in many other countries strike activity declined in the immediate post-war period. In such diverse nations as the Union of South Africa, Canada, Ceylon, Sweden, Australia, Japan and France, the number of working days lost due to industrial disputes was significantly less in the years 1954-1955 than it was during the years 1946-1949.[4] The dislocations after the war were responsible for a record number of disputes in these countries and even without specific legislation, the post-war tempo was not sustained when the transition to a more peaceful way of life was attained. One prominent exception was the United Kingdom where strike activity in the latter period was approximately the same or even higher than in the base period. This may have been due to the smoothness of the post-war transition in the United Kingdom.

The information given in Table I is deficient for comparative purposes because it does not show, for India, the percentage of the total working time lost in strikes each year. Such information for the economy as a whole is available only for the U.S.A. However, if inquiry is restricted to only manufacturing industries, such data as are available are presented in Table II for the years 1950-1957. In three of the eight years the number of days idle as a percent of total working time is about the same in each country, with the figures not varying from each other by more than .05 of a percentage point. In only one of the remaining five years is the figure in the U.S.A. higher than that of India. This occurred in 1952 when two-fifths of the total time lost in industrial disputes was accounted for the strike in the basic steel industry.

[3] Oscar A. Ornati, *Jobs and Workers in India* (Ithaca, N.Y. : The Institute of International Industrial and Labour Relations, Cornell University, 1955).

[4] The data on strike activity in each of these countries can be found in, International Labour Organization, *Year Book of Labour Statistics*, 1957.

[5] V. V. Giri, *Labour Problems in Indian Industry* (Bombay : Asia Publishing House, Second Edition, 1959), page 90.

TABLE II

Man-Days Lost in Work Stoppages in Manufacturing Industries, India and the U.S.A.

Year	*Actual No.*		*No. of Man-Days Idle Percent of Estimated Working Time of All Workers.*	
	India	*U.S.A.*	*India*	*U.S.A.*
1950	1,830,000	22,900,000	1·78	·66
1951	2,696,000	17,500,000	·42	·48
1952	2,056,000	43,300,000	·31	1·03
1953	2,564,000	15,600,000	·38	·36
1954	2,713,000	13,700,000	·40	·33
1955	4,164,000	18,800,000	·56	·45
1956	4,892,000	27,100,000	·60	·63
1957	3,923,000	9,390,000	·40	·22
1958	4,046,000	15,400,000	N.A.	·39

Source :— *Indian Labour Gazette*, June, 1959. U.S. Department of Labour, *Monthly Labor Review*, (Annual reviews of Work Stoppages are contained in the May or June issues each year).

(1) Figures for 1957, in India, not strictly comparable with those of earlier years because of changes in geographical coverage and because of inclusion in 1957 of estimated figures of working time of workers in factories not submitting returns under the Factories Act.

In 1950, the percentage of the lost time in India is more than two-and-one-half times as great as in the U.S.A. In a sense, this was the reverse of the situation in 1952 since more than 70% of the total number of man-days lost in India was attributable to the general strike in the Bombay cotton textile industry, a strike which was started in protest over a wage award of the Industrial Court.[5] In the remaining three years, the disparity in the figures is not as great, but in each of them, 1954, 1955 and especially 1957, the time loss in Indian industry is comparatively greater than in the U.S.A.

The most relevant comparisons of strike activity can be made on the basis of the data for particular industries. In many countries throughout the world there is an observable difference in the proneness to strike among workers in different industries.[6] Also, the frequency and duration of strikes are dependent upon the extent of union activity which differs in various industries. However, published data on man-days idle as a percentage of total time worked in particular industries is available in India only for 1957, and even for that year, for only a few industries.

[6] Clark Kerr and Abraham Siege. "The Interindustry Propensity to Strike,—An International Comparison," in Kornhauser, Dubin and Ross, *Industrial Conflict op.cit.*, chapter 14.

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TABLE III

Work Stoppages in Particular Industries, India and U.S.A. 1957.

Industry	*No. of Disputes*		*No. of Workers Involved*		*No. of Man-Days*			
	India	*U.S.A.*	*India*	*U.S.A.*	*India*	*Idle. U.S.A.*	*Percent of Estimated Working Time of All Workers.*	
							India.	*U.S.A.*
All Manufacturing	127	1,965	538,274	778,000	3,922,831	9,390,000	·40	0·22
Textile Products.		47		14,000		212,000		·08
Cotton Mills	276		246,193		1,486,018		·58	
Jute Mills	16		29,248		416,750		·52	
Silk Mills	27		2,674		10,951		·06	
Woolen Mills.	4		1,036		18,643		·39	
Paper Mills	6	55	4,034	15,300	70,960	256,000	·91	·17
Leather and Leather Products	10	56	498	11,300	705	99,700	·01	·10
Engineering (except Iron and Steel).	141	230	53,954	89,900	378,779	1,380,000	·18	·32
Iron and Steel	55	232	35,641	118,000	261,414	1,150,000	·77	·35
Mining and Quarrying	127	198	94,198	56,300	1,023,353	240,000		
Coal.	57		23,592		567,176		·53	·11
Others	70		70,606		456,177		·54	

Source : *Indian Labour Gazette*, June, 1959, U.S. Department of Labor, *Monthly Labor Review*, May, 1958.

(1) Because of varying definitions in both countries, industrial classifications are not strictly comparable.

Table III shows comparative data for six industrial groupings. Data for only one year cannot be considered conclusive, especially since this is a year when over-all strike activity was at an all-time low in the U.S.A. In the textile industry in the U.S.A. the percentage time loss was only .08% in contrast to the figure of .59% in the cotton textile mills which dominate the textile industry in India. Such a difference may be accounted for by the fact that the cotton textile industry is heavily unionized in India, whereas in the United States, the influence of unionism in this industry has weaknened as the large mills have migrated from the northern sections of the country to the less heavily unionized South.

In the engineering industries, the time loss in percentage terms is greater in the U.S.A. as it is in the leather industry which has a small sample of disputes in both countries. In the remaining four groupings, the strike experience in India is higher than in the U.S.A. as measured by the percentage of man-days idle.

In the future, reliable data on the percentage figures of man-days idle in particular industries and for the economy as whole, should become more readily available in India. When this happens more valid comparisons extending over longer periods of time can be made. Based upon the fragmentary data available, and at the risk of drastic oversimplification, the following conclusions may be stated :

I. In the U.S.A. during the period 1946-1958, the number of man-days idle in industrial disputes, both in absolute and per centage terms, has shown a general downward trend. This is in conformity with the behaviour of these measures in other countries. In India, the number of man-days idle declined after the immediate post-war period, but in recent years it has tended to move up.

2. With the exception of one year, 1952, the percentage of total time lost in industrial disputes in manufacturing industries is either nearly the same or greater in India than in the U.S.A. during the period, 1950-1957.

3. During 1957, in four of the six industrial groupings considered, the strike experience was significantly worse in India than in the U.S.A. This comparison is tempered by the fact that only one year and only a few industries are considered.

All this must be set against the fact that the strike activity in the U.S.A. has been relatively high as compared to other countries such as Australia, Canada, Great Britain and Sweden.[7]

[7] Arthur M. Ross and Donald Irwin. "Strike Experience in Five Countries 1927-1947," *Industrial and Labour Relations Review* vol. 4 (1951) page 332. Data carried forward to 1950 are presented in Kornhauser, Dubin and Ross, *op.cit.*, page 18.

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Public Policy Towards Strikes in the U.S.A.

The paradox about the relatively greater strike activity in India is that public policy in India is directed towards minimizing the strike weapon and to providing alternative methods of settling disputes through compulsory adjudication. On the other hand, the United States government is reluctant to intervene to prevent strikes or to stop them once they have begun.

Some of the individual states of the United States have passed ligislation providing for the compulsory arbitration of labour disputes in public utilities. In the United States, unlike the situation in India the term public utilities is confined to essential transportation and the provision of certain public services such as gas, electricity and water. Moreover, resort to the compulsory features of these acts has become increasingly rare since the Supreme Court cast doubt upon the right of the individual states to legislate in this area.[8]

In the federal sphere, the important legislation is the national emergency section of the Labour-Management Relations Act of 1947 (Taft-Hartley Act). Under this, the President may intervene to prevent or stop a strike which threatens to interfere with national health or safety. But these powers extend only to stopping the strike temporarily for a maximum period of 80 days. After the 80 days, the parties are free to resume their conflict if no settlement has been reached. Under this legislation, the President appoints a board of inquiry whose power is limited to "finding the facts," and to reporting on the employer's last offer which the employees are asked to either accept or reject. The board has no power to impose or even recommend a settlement but must confine itself to its fact-finding function.[9] Even this mild sort of intervention is not resorted to frequently. In the twelve years in which the Act has been in force, the President has invoked its provisions less than twenty times. An older piece of legislation governs labour relations on railroads and airlines, but even in this vital area of the economy, the governmental boards may recommend but may not impose settlements.[10]

[8] For an analysis of the experience under some of these statues, see : Lois MacDonald, *Compulsory Arbitration in New Jersey* (New York : New York University Institute of Labor Relations and Social Security, 1949) ; R. R. France and R. A. Lester, *Compulsory Arbitration of Utility Disputes in New Jersey and Pennsylvania* (Princeton : Princeton University Industrial Relations Section, 1951).

[9] The experience under this act has been evaluated and discussed in a series of articles contained in Irving Bernstein, Harold L. Enarson and R. W. Fleming, *Emergency Disputes and National Policy* (New York ; Harper and Brothers, 1955).

[10] For a critical appraisal of the workings of railway labour legislation in the U.S.A., see : Jacob J. Kaufman, *Collective Bargaining in the Railroad Industry* (New York : Columbia University Press, 1954).

Governments in the United States, are active in the field of mediation or conciliation of labour disputes.[11] The industrially important states, some cities and the federal government each has its own conciliation agency. However, conciliation in the United States is not a way-station along the road to compulsory adjudication. No law requires that a conciliator be called in, although the law requires the parties to notify the federal and state conciliation services 30 days prior to the expiry of a collective bargaining agreement. The conciliator may be useful to the parties since he will have knowledge of settlements in other firms, and he may be able to inform the parties of how issues similar to those which divide them have been settled elsewhere. However, he comes armed with no powers except the powers of persuasion, and essentially, his intervention is but one step in the collective bargaining process. He can bring to bear all of his trained techniques of persuasion to impress upon the parties that if they do not come to an agreement, the only alternative is the strike.[12]

Government intervention in the settlement of labour disputes in the United States is, therefore, largely limited to providing government conciliators who may use their good offices to try to bring about agreement. If they fail, the union is free to go out on strike and the company is free to resist the strike. Once a strike begins, the government may continue its conciliation efforts, it may even encourage the parties to submit their dispute voluntarily to arbitration, but it will not intervene to provide a forum for the compulsory adjudication of disputes.

What accounts for this attitude towards strikes ? It is difficult to generalize about attitudes towards industrial conflict in a country with such diverse groups, and any generalization is subject to many exceptions. However, it can be said that there is some recognition of the fact that work stoppages are only one, albeit the most dramatic, evidence of industrial unrest. Basic conflicts between the parties can be expressed in other ways such as absenteeism, labour turnover and drops in worker efficiency. The mere absence of overt conflict does not automatically guarantee that all is well with the relationships between the parties ; neither does the presence of stoppages necessarily indicate any fatal breakdown in these relationships.

[11] Although an academic distinction can be made between " conciliation " and " mediation ," in practice the terms have come to be used interchangeably. The U.S. agency dealing with these matters has, since 1947, been known as the Federal Mediation and Conciliation Agency.

[12] For an examination of the process of mediation or conciliation see, Ellison W. Chalmers, " The Conciliation Process, " *Industrial and Labor Relations Review*, vol. 1 (April, 1948), pages 337-350 ; Allan Weisenfeld, " Some Thoughts on Labor Mediation," Proceedings of the Sixth Annual Meeting, Industrial Relations Research Association (Madison : IRRA, 1954), pages 276-283.

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The strike weapon would not be regarded with complacency if its use were equated with violence. Increasingly however, in the United States, the strike has become an institutionalized form of conflict which is built into the society as a legitimate channel of labour protest.[13] Much of the emotional content has gone out of the strike as collective bargaining has more and more come to be conducted by professionals on both sides. Once it is recognized that conflict orientations may find expression in outlets other than the strike, the strike can be looked upon as one method of allowing workers to express their dissatisfactions and to have them resolved in relatively harmless ways.

The strike serves the social function of making explicit the grounds which separate the group in opposition, and of bringing the differences out in the open where they become sensitive to the pressures of public opinion and subject to social control.[14] The very clash of interests in a free society may have a stabilizing effect as the parties form new common rules as a means of accommodation of living together. The American ideal is a pluralistic society, one of accommodaed conflict rather than one of universal collaboration among all groups.[15]

Public Policy Towards Strikes in India

Public Policy in India does not prohibit the strike but neither does it admit it as an acceptable method of resolving all industrial disputes. Although there is much talk about encouraging collective bargaining, there is no real recognition of the fact that true collective bargaining is impossible unless the union has the right to strike and the management the correlative right to resist the strike.

Under the Central legislation, the Industrial Disputes Act, 1947, when the government "apprehends" a dispute, it may intervene by sending conciliation officers to try to settle the matter. Although the conciliation officer is not given the power to impose a settlement, he comes to the parties armed with more weapons than does his American counterpart. The law grants him the right to enter the premises occupied by any establishment to which the dispute relates, and he may call for and inspect any document which he has grounds for considering as relevant to the industrial dispute.[16]

[13] Harold Wilensky and Charles Lebaux, *Industrial Society and Social Welfare* (New York ; Russel Sage Foundation, 1958), page 130.

[14] Kornhauser, Dubin and Rose, "Problems and Viewpoints," in *Industrial Conflict, op.cit.*, page 16.

[15] Clark Kerr, "What Became of the Independent Spirit ?" *Fortune Magazine* vol. 48 (July, 1953) pages 110-111, 134-136.

[16] Industrial Disputes Act, 1947, section 11, (4). page 10.

The entrance of the Indian conciliation officer automatically freezes the *status-quo ante*. During the pendency of any conciliation proceeding, the employer is not allowed to alter to the prejudice of the workmen concerned, the conditions of service applicable to them immediately before the commencement of such a dispute, except with the express permission in writing of the authority before whom the proceeding is being conducted. This freeze pertains only to matters connected with the dispute. Since 1954, the employer is allowed to change the conditions in regard to any matter not connected with the dispute.

If the conciliator is unable to persuade the parties to come to an agreement, he is obliged to submit a formal report to the appropriate government, setting forth his efforts to bring about a settlement together with " the reasons on account of which, in his opinion, a settlement could not be arrived at."[17] This report may form the basis of the government's decision to refer or not to refer the dispute to compulsory adjudication. When it is recognized that one party or the other may be desperately seeking, either to have the government intervene or not to have the government intervene, the very obligation on the conciliator to make a formal report gives him some measure of power. Although his report is not binding upon government, it may well be used to persuade one party or the other to agree to a particular proposed settlement.

In both countries, however, the intervention of a conciliation officer is a mild form of intervention. Whereas, however, this is the end of intervention in the United States, it may be but the beginning in India. The government has the discretion to refer the dispute to compulsory adjudication. One measure of the extent of government intervention is the power to refer or not to refer. This can be used to favour one union over the other and to influence the course of settlement. Once a dispute has been referred to a Board of Conciliation for promotion of the settlement, to a Labour Court either for inquiry or for adjudication, or to an Industrial Tribunal for adjudication, strikes and lockouts may be made illegal during the pendency of the proceedings, and for a limited amount of time afterwards. Illegal strikes are punishable by fines and terms of imprisonment.[18]

A different set of rules governs industries defined as public utility services. In these industries due notice must be given of a strike or lockout, and no employee may go out on strike during the pendency of any conciliation proceedings. Where a notice of strike has been given, the law provides that the government shall make a reference of the dispute unless it considers that the notice has been frivolously

[17] *Ibid.*, Section 12 (4). page 10.
[18] *Ibid.* sections 22 and 26.

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or vexatiously given, or that it would be inexpedient to do so. The term public utilities has been defined in the first schedule as including not only railways, postal, telegraph, telephone services, industries which supply light, power or water to the public, or one concerned with any system of public conservancy or sanitation ; but also the banking, coal, cement, cotton textiles, foodstuffs and iron and steel industries if the appropriate government so notifies in the official gazette. The State of Madras, for example, has declared the salt, cotton textile, motor transport and cement industries to be public utility services under the Act.[19]

The Attitude Towards Strikes in India

The whole public policy in India is directed towards minimizing the use of the strike weapon and substituting in its stead some form or other of governmental intervention. This attitude is not born of mere chance but is deeper-seated. According to Dunlop, each national industrial relations system is shaped " by the particular technological and market context, by the period of history in which industrialization arises, by the sequence of national, social and political developments, and by the process of economic development. A final decisive influence on the evolution of a national industrial relations system is the broad strategy of the elite directing the industrialization program of the country."[20]

The planners form one elite among the several who are attempting to direct the industrialization process in India. They are imbued with what might be called the " planning mentality," the keynote of which is the belief that there are rational solutions to impending economic problems and these require a delicate adjustment among the various interest groups. The thinking seems to be that if the planners can control the awsomely difficult tasks of directing the level of national investment, of building new industry, of encouraging exports, or scaling down imports of consumer goods, etc., there is no real reason why the relatively less difficult job of eliminating work stoppages cannot also be accomplished. According to the First Five Year Plan, " Economic progress is ..... bound up with industrial peace." Industrial relations are conceived of not as a matter between employers and employees alone, but are, " a vital concern of the community which may be expressed in measures for the protection of its larger interests."[21]

[19] *Indian Labour Gazette*, vol. 15 (June, 1958), page 1245. The declaration of these industries as public utility services can be made only for a period of six months, but the government may extend these declarations at the end of any six month period.

[20] John T. Dunlop, *Industrial Relations Systems* (New York : Henry Holt and Co., 1958), page 317.

[21] This and subsequent quotations about the plan are from Government of India, Planning Commission, *The First Five Year Plan* (New Delhi : 1952), " Labour," Chapter XXXIV.

The planners do not visualize a society of accommodated conflict where the strike is an institutionalized channel of protest, but instead a community organized for social justice in which there is a constant reconciliation of the interests of all sections. In such a community, "no legitimate occasion for a group to interfere with production or disorganise the life of a community should arise." It is recognized, however, that in spite of the essential oneness of interests, there may be considerable ground over which conflicts may arise.

Collective bargaining is implicitly rejected as method of settling such conflicts for several reasons. The assumption is made that the "employer usually possesses superior strength." Also, it is claimed that experience has demonstrated "that in the majority of labour struggles, owing to the ignorance and the mistakes of the workers and their organizational and bargaining weakness they have failed to gain their ends irrespective of the merits of the disputes." Basically the strike is rejected as a useful social endeavour. "Whatever may be the apparent outcome of a labour conflict, the resulting loss far outweights any advantages secured by a party and in most cases all concerned stand to lose."

Still, much of the labour policy as contained in the First Five Year Plan is devoted to paying lip service to the concept of collective bargaining and the promotion of schemes for the settlement of disputes between the parties themselves. According to the Plan, "...the endeavour of the State has all along to be to encourage mutual settlement, collective bargaining and voluntary arbitration to the utmost extent, and thereby to reduce to the minimum occasions for its intervention in industrial disputes and the exercise of the special powers." In a sense, this is like having one's cake and eating it too. Once the state intervenes to provide a forum for the compulsory adjudication of disputes, the parties are left with no real incentive to bargain collectively to resolve their differences. It remains to be proved that a system of collective bargaining and one of compulsory adjudication can coexist.

No radical changes in the basic philosophy of industrial relations are discernible in the Second Five Year Plan. Industrial peace is still held to be indispensable for the development of an undertaking or an industry. However, some doubts are expressed about the workings of the industrial relations machinery with complaints being voiced at about the inadequate implementation and enforcement of wards and agreements. This does not lead to the conclusion that perhaps such awards may be unenforceable, but the recommendation is made that the penalties for non-compliance be made heavier in order to increase their detterent effect. It is recognized that, "while the observance of stricter discipline, both on the part of labour and management is a

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matter that cannot be imposed by legislation. ...," and yet, " ... some steps, legislative or otherwise, in case of rank indiscipline require to be thought of."[22] This is an example of the basic schizophrenia affecting labour policy. On the one hand, it is recognised that the problems are not susceptible of legislative solution, and on the other hand, such solutions are not rejected, although in this instance the current Code of Discipline stops short of legislative enactment.[23]

India's labour policy has its roots in the economic and political history of the country. In the days before Independence, the prevailing attitude of the employers was patternalistic and in many ways this has not changed. The Unions viewed themselves as representatives of workers who were victimised by the prevailing system of capitalism, who lacked bargaining power and who demanded favoured treatment from political leaders. The main strides towards industrialization were made only after Independence was achieved and the largest labour union was, in effect, an arm of the Congress party which played such a large role in the winning of independence. The party required labour's support and this extended to recognizing labour as a group which needed special protection, but the right of labour to use its own self-help weapons was never conceded. In the 1931 Karachi resolution, the party assured workers of their rights to form unions and that their interests would be protected by establishing suitable disputes machinery, but the right to strike was not mentioned.[24]

In part, the Indian attitude towards use of the strike weapon has been influenced by the Gandhian ideal of the search for truth. It has been argued that there is a just and rational solution to the conflict of interests between employer and employee and that this solution is capable of being discovered by disinterested representatives of the larger community which has a vital stake in the outcome. Industrial relations problems have been likened to conflicts of interests in the traditional joint family where the head of the family helps to iron out such differences. Both labour and management as well as the community are visualised as members of the same joint family. Once it is accepted that there is a just and rational solution which can be discovered, it follows that coercion is not only unnecessary but morally wrong. Collective bargaining is viewed as merely a settlement of disputes by combat and is equated to the law of the

[22] Government of India, Planning Commission, *Second Five Year Plan* (New Delhi : 1956), " Labour Policy and Programmes," chapter XXVII, page 578.

[23] According to the remarks of B. N. Datar, Labour and Employment Adviser of the Ministry of Labour and Employment, at the Third All-India Labour Economics Conference in Madras, January 1960, no radical changes are being proposed for the third five year plan.

[24] The text of the resolution on Labour can be found in, B. Pattabhi Sitaramayya, *History of the Indian Natioanl Congress* (Bombay: Padma Publications, Ltd. 1985), volume I, page 464.

jungle where might triumphs over right.[25] Although this is represented as the views of Gandhi's followers in the trade union movement, it should be noted that Gandhiji himself had a shrewd appreciation of the uses of the strike in collective bargaining. He recognised the futility of the strike as a mere protest weapon. As far back as 1918 he laid the necessary preconditions for a successful strike and these still have applicability to modern conditions.[26]

Collective Bargaining and the Law of the Jungle

Although a satisfactory theory of collective bargaining remains to be developed,[27] still the analogy drawn between collective bargaining and the law of the jungle needs more careful examination before it can be accepted as a useful illustrative device. The results of collective bargaining depend to a certain extent on the relative strength of the parties, but the question can be raised as to whether this makes the process an immoral one which a society dedicated to social justice need necessarily reject. Collective bargaining is a method of determining wages, hours and working conditions in a manner which reflects basic economic forces. No matter how powerful a union, no matter how well organised and well disciplined the workers, the union cannot succeed for very long in securing wage increases and continued employment if the firm is experiencing losses. On the other hand, no matter how powerful the employer, he cannot drive wages below the level which will enable him to recruit the requisite number of workers necessary to man his establishment, given a particular level of technology and a given product and labour market.[28]

Of course, in an economy characterised by imperfect competition, there may be a wide discrepancy between the wage the employer must offer and the wage he can offer before he either closes the business or substitutes other factors for labour. Collective bargaining is a method of determining where the wage should be set between these limits. It may be objected to on the grounds that it is not fair or equitable to decide differences of opinion in this barbaric fashion with the threat

[25] For a range of representative opinions on this subject, see : Charles A. Myers, *Industrial Relations in India* (Bombay : Asia Publishing House, 1958), pages 256-262.

[26] M. K. Gandhi, "Strikes," reprinted in, *Towards Non-Violent Socialism* (Ahmedabad : Navajivan Publishing House, 1951), page 92.

[27] See for example, Thomas C. Schelling, "An Essay on Bargaining," *America Economic Review*, vol. 46, (June, 1956), pages 281-306 ; J. Pen "A General Theory of Bargaining" *American Economic Review*, vol. 42, (March, 1952), pages 24-42. J. R. Hicks, *The Theory of Wages* (New York : Peter Smith, 1948), chapter VII : and Neil W. Chamberlain, *Collective Bargaining* (New York : McGraw Hill Book Company, 1949), Chapter 10.

[28] For an elaboration of a minimum-maximum-theory of wage determination at the plant level, see : Lloyd G. Reynolds, *Labor Economics and Labor Relations* (Englewood Cliffs, N. J. : Prentice-Hall, Inc., 1959), Third Edition, Chapter 19.

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of a strike over-hanging the deliberations of the parties. But it is not immediately obvious that the method of adjudication by representatives of the community is any fairer or any more equitable. The exact way in which the difference between what the employer can pay and what he must pay should be determined may not be susceptible to rational decision-making. Rational inquiry may be able to establish the limits, but where in between the limits the wage should be set may have to remain an essentially arbitrary decision removed from considerations of equity and fairness. The essential arbitrariness of these decisions is not fundamentally altered by devising some creed or norms to guide the decision-making, no matter how much they are overlaid with layers of rationalisations.

In addition, it is at least doubtful whether the rational investigator can discover the limits. These depend upon such items as profits and productivity levels which are difficult to define and identify. It will not do to ask what level of wages the employer can pay and still employ X number of workers . Given the best of intentions, the employer may not really know the answer until he is confronted with the problem of making a decision among competing alternatives in the real world. One cannot idly play at this game any more than one can get a group of serious bridge players to use their wits unless something is at stake. Collective bargaining may be likened to a game where the stakes are real. Can the employer pay the wage increase requested or would he rather have the employees out on strike ? When confronted with this choice, the employer will have to utilise all the factual accounting and labour market data available, plus the best estimates of the probable length of the strike and the capacity of the firm to resist the strike. It is not a question of having his legal representative present to the industrial tribunal countless reasons wty a wage increase cannot be granted. It is a matter of having to move, one way or the other, conscious always of the relative costs of the movement along each path. The union will, of course, be confronted with analogous choices ; whether it should accept an offer or go out on strike, and it too must calculate the relative cost of each path.

This is not to say that each strike is undertaken only after a rational calculation on the part of both parties. Some strikes may be intended only to display strength. In a sense, they may be cosidered as an investment amortisable over the whole future history of the union-company relations.[29] Strikes may be called over points of principle, which to the disinterested observer, may appear to be picayune. Other strikes may be called by irresponsible union leaders who fail to calculate their chances rationally and who may be willing to ruin

[29] Melvin Reder, " The Theory of Union Wage Policy," *Review of Economic Statistics*, vol. 34 (February, 1952), page 39.

a well-established relationship for the sake of prestige and power. All this is to say only that the system of collective bargaining does not guarantee a perfect industrial relations system. But it may be futile to search for perfection and one may have to choose only the best among alternatives. A system of collective bargaining does have the advantage of presenting the parties with real choices which help reveal their true positions.

The Future of Industrial Relations in India

One objection to replacing a system of compulsory adjudication with one of collective bargaining in India is that the labour unions lack bargaining strength. This point must be accepted. A system of compulsory adjudication could not be scrapped overnight. But if collective bargaining becomes the accepted goal, public policy could be directed towards strengthening trade unions. The present Indian system of allowing more than one union in a plant may assure a maximum of political freedom, but it is almost guaranteed to keep unions weak and to dilute their bargaining power. It would be possible for government to require that there be only a single union in a bargaining unit. The test of the majority status of the union need not be a membership check but rather a secret ballot to test whether a majority of workers in a bargaining unit wish to be represented by a particular union. Once a majority union is selected, it could be given exclusive bargaining rights with the positive obligation to represent all workers in the unit regardless of whether or not they are all actually union members.[39]

The company could be required by law to collectively bargain with the union. This does not mean that it would be obliged to agree with the union, but that it would have to meet with its representatives and bargain in good faith. An administrative tribunal would have to be established to define boundaries of bargaining units, to supervise elections and decide cases of alleged interferences with the free choices of workers.

[39] The proposals for the strengthening of unions by the governmental encouragement of collective bargaining are, of course, not new. V. V. Giri has long advocated the introduction of a larger measure of voluntarism in industrial relations. The Bombay Industrial Relations Act, although it stops short of requiring secret ballots to determine an exclusive barganing agent, does provide for a representative union determined by a check of union membership rolls. The 1947 Amendment to the Trades Union Act of 1926 contained a list of employer unfair labour practises designed to prevent employer interference in the free choice of unions on the part of workers, although these provisions have never been implemented. Van Dusen Kennedy has made several significant suggestions for strengthening the role of trade unions and for encouraging collective bargaining in India. See his *Problems of Indian Trade Unionism and Labour Relations* (Bombay Association of Free Trade Unionists). Reprint No. 77 University of California, Institute of Industrial Relations, Berkeley, 1955.

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In essence these procedures were adopted by the United States in the Wagner Act of 1935. To apply them in India would require certain changes to adopt them to a different environment. This would be a case of cultural borrowing from the West but the whole process of economic development involves many instances of such borrowings. Of course, India need not repeat many of the mistakes the United States made in this pioneering legislation. Provisions could be made for the decertification as well as the certification of unions, for the protection of minority rights, for the prevention of abuses of the power position of unions, etc. All of this involves governmental interference in idustrial relations but of a different sort than is now current in India. Interference would be confined to starting the engine of collective bargaining, and not to establishing the terms and conditions of employment by governmental decree.

Under such a system of collective bargaining it would be possible for the parties to develop their own private arbitration machinery for the settlement of disputes which arise over the interpretation and application of the collective bargaining agreement. Basic disputes over fresh provisions could be decided by collective bargaining, and if necessary, with the use of the strike weapon.

The possibility of work stoppages is the other big obstacle to replacing a system of compulsory adjudication with one of collective bargaining in India. Little can be added to what has already been said on this subject, but the main points can be summarized :

1. Strikes are an essential ingredient of the collective bargaining process in the sense that the union must have the right to strike and the management must have the right to resist the strike. Government intervention to prevent or stop strikes frustrates the process of collective bargaining.

2. Strikes are not to be regarded as wholly evil. The very clash of interests may have a stabilizing effect as the parties form new rules as a means of accommodation. The bottling up of labour protest may result in its being expressed in forms other than the strike such as absenteeism, turnover, low efficiency etc.

3. India's system of compulsory adjudication designed to minimize strikes may not have succeeded in accomplishing this goal. India's strike experience is relatively unfavourable as compared to a country like the U.S.A. which has fairly high level of strike activity.

Ahmedabad MONROE BERKOWITZ

THE PERMANENT INCOME HYPOTHESIS : A CRITICAL APPRAISAL[1]

1. *Introduction*

1.1 Professor Milton Friedman's book setting forth the 'permanent income hypothesis' concerning the relation between consumption expenditure and income is a major contribution to the theory of consumer behaviour.[2] The relation between aggregate consumption and aggregate income, generally termed the consumption function, has become an accepted tool of economic analysis ever since Keynes assigned to it a vital role in his theoretical structure in the *General Theory*. While quantitative studies of psychological variables like motivation, attitudes, expectations, which significantly influence consumer behaviour, would cast doubt on the validity of treating consumption as a function of income alone, the controversy in the field of consumer behaviour revolves more round the *nature* (i.e., mathematical form) rather than the *notion* of the consumption function.

1.2 Two questions about the consumption function are particularly important. Firstly, granting that income is the most significant variable affecting consumption, what is the relevant concept of income—past, current, expected, or some combination of the three ? Secondly, is consumption proportional to income, so that average and marginal propensities to consume coincide ? In the original Keynesian formulation, consumption was related to current absolute income. Regarding the nature of the income consumption relationship, while Keynes considered marginal propensity to consume less than unity as the "fundamental psychological rule of any modern community," he asserted somewhat less definitely that marginal propensity to consume would be a decreasing function of real income i.e., marginal propensity would be less than average propensity so that income elasticity of consumption would be less than unity.[3]

[1] I am grateful to Professor C. R. Whittlesey for some helpful suggestions for improvement.

[2] Milton Friedman, *A Theory of the Consumption Function*, a study by the National Bureau of Economic Research, New York, published by Princeton University Press, Princeton, 1957. All page references in the text relate to the book.

[3] In his discussion of propensity to consume, Keynes mentions the reasons which "will lead, as a rule, to a greater *proportion* of income being saved as real income increases" and goes on to say : "But whether or not a greater proportion is saved, we take it as a fundamental psychological rule of any modern community that, when its real income is increased, it will not increase its consumption by an equal absolute amount."—J. M. Keynes, *The General Theory of Employment, Interest and Money*, p. 97.

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1.3 This one of Keynes' many hypotheses lent itself most easily to empirical verification. Empirical evidence raised doubts about the adequacy of the Keynesian consumption function and a number of complex hypotheses were formulated. All these have involved reinterpretation of the independent variable in the consumption function, ranging from introduction of additional explanatory variable like assets to taking 'income' to mean the relative income position of a household in its community. To these Professor Friedman has now added one more. Derived from the "currently accepted pure theory of consumer behaviour," (p. 6) and tested against extensive statistical material relating mainly to the United States, Prof Friedman claims it to be "potentially more fruitful and in some measure more general than either the relative income hypothesis or the wealth income hypothesis taken by itself" (p. 6), both of which he considers superior to the absolute income hypothesis.

2. *Permanent Income Hypothesis*

2.1 The core of Prof. Friedman's hypothesis is to be found in the division of observed income and consumption of a consumer unit into permanent and transient components, both of which are unobservable. Observed income and consumption reflect the influence of a host of transient factors, varying from one year to another; consequently observed consumption cannot be expected to vary in any systematic manner with observed income. On the other hand, it is maintained that only the permanent component of observed income influences in a systematic manner a consumer unit's decision to spend or save. The ratio of permanent consumption to permanent income, which may very from individual to individual and from time to time even for the same individual, is asserted to be independent of the level of permanent income and a function of rate of interest, ratio of non-human wealth to income, and factors affecting consumer unit's preference for current consumption versus accumulation.

2.2 Prof. Friedman has brought to bear his blilliant expertise on an intricate problem, provided a refutable hypothesis, and subjected it to empirical verification. Acceptance of the permanent income hypothesis would have far reaching implications for consumption research and would require rethinking on many problems relating to economic fluctuations and growth. Whether the hypothesis is accepted or not, one could legitimately expect future research in the field of consumer behaviour to be considerably influenced by Prof. Friedman's contribution. This in itself requires that the hypothesis should be subjected to a close scrutiny.

2.3 The hypothesis can be examined on two levels: the pure theory of consumer behaviour which underlies the hypothesis and the

empirical verification of it. The latter requires much greater familiarity with data on income and consumption for the United States and other countries and much more competence to use sophisticated statistical tests suggested by Prof. Friedman than the present reviewer possesses. We shall therefore concern ourselves only with the logic and *a priori* plausibility of the hypothesis.

2.4 To judge a hypothesis by its logic alone would be a questionable procedure according to Prof. Friedman's methodological position maintained elsewhere.[4] Within very broad limits it is certainly questionable to acclaim a theory as valid *merely* because of its internal logical consistency. 'Implicit theorising,' however, consistent logically, is devoid of any operational significance. In asserting that a theory should yield valid and meaningful propositions that can be tested empirically, Prof. Friedman has done a signal service to the study of economics and in his present book he has acted on his own precept. It is doubtful, however, if empirical verification of ultimate implications of a theory, while necessary, is sufficient to make it valid, if assumptions do not bear a similar test. This is particularly true since evidence for empirical testing is often not available precisely in the form required by the hypothesis. To cite one example: according to Prof. Friedman's hypothesis, the ratio of permanent consumption to permanent income (designated by K for a single consumer unit) is influenced by age, wealth, size of family etc. However, in the budget data which are used as the principal evidence in support of the hypothesis households are grouped together regardless of age or size of the family of consumer units.[5] In any case, factual evidence can never 'prove' a hypothesis; it can only fail to disprove it. If we have to be satisfied with confirmation of a hypothesis by experience only in this limited sense, there is always a possibility that some new data or reexamination of old data may make the hypothesis inadequate and call for a revision. A critical appraisal of the logic of Prof. Friedman's hypothesis may not, therefore, be quite fruitless.

[4] In his earlier book, entitled *Essays in Positive Economics*, Professor Friedman has maintained that "the only relevant test of the *validity* (italics in the original) of a hypothesis is comparison of its predictions with experience" (p. 8)—and "a theory cannot be tested by the "realism" of its "assumptions". (p. 23).

[5] It is pertinent to know that in explaining the secular constancy of the aggregate average propensity to consume (designated by K*) in the United States, secular reduction in the size of the family is mentioned as one of the important factors reducing the propensity to consume. The secular constancy of K* is not required by the hypothesis but implies that variables affecting K* (in addition to variables affecting K, K* is also affected by distribution of consumer units by these variables) have either remained the same or changed so as to offset each other.

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3. *Permanent Income as Strategic Variable :*

3.1 Let us examine the permanent income hpothesis a little more closely. Professor Friedman summarises his hypothesis in a system of three equations for an individual consumer unit;

(*i*) $Y = Y_p + Y_t$

(*ii*) $C = C_p + C_t$

(*iii*) $\frac{C_p}{Y_p} = K$ where K is a function of rate of interest (i), ratio of nonhuman wealth to income (w), and other factors affecting the consumer unit's tastes for current consumption versus accumulation (u).

The first two equations assert that measured income (Y) and measured consumption (C) are each a sum of two components: permanent component (denoted by subscript p) which enters into (iii) and transitory component (denoted by subscript t). The third equation defines a relation between permanent income and permanent consumption that is independent of the level of permanent income but depends on other variables.

3.2 What is the justification for the sharp distinction which Prof. Friedman draws between observed income or that which is recorded for a particular period and permanent income ? While limitations of statistical data force identification of current receipts with income and expenditure on goods and services with consumption, observation of our own behaviour and the behaviour of others indicate that there need not be any close and simple relationship between consumption in any given short period and income in the same period. Consumers do not adapt their cash expenditures on consumption to their cash receipts and also cash expenditures may not be a good index of value of services consumed. So long as inappropriate concepts of income and consumption are used, the tendency for the fraction of income saved to rise with income, as shown by budget data, does not tell anything meaningful about consumer behaviour. From the viewpoint of consumer behaviour, what is significant is not measured income and consumption but the concepts of income and consumption which are implicit in the pure theory of consumer behaviour. These Prof. Friedman chooses to call permanent income and permanent consumption.

3.3 Although permanent income is the most strategic variable in Prof. Friedman's hypothesis, there is no single consistent definition of the permanent income to which he adheres throughout his analysis. In the pure theory of consumer beaviour, permanent income is defined as "the amount a consumer unit could consume (or believes that it could) while maintaining its wealth intact" (p. 10). Permanent income thus equals interest on the capitalised value of a consumer unit's expected future earnings from his total assets, including his earning capa-

city. It thus reflects the effect of all those factors which determine the capital value or wealth of a consumer unit such as its training and ability, nonhuman wealth it owns, nature of the occupation followed, location of economic activity, experience of other units which are otherwise similar but of different age, secular trend of income etc.

3.4 Even with perfect foresight, which implies that expectations are held with complete certainty and guarantees that expectations are fully realised (ignoring that expectations held with complete certainty is a contradiction in terms), permanent income thus defined, cannot remain constant throughout the lifetime of a consumer unit. Unless the whole of the permanent income is consumed (i.e. $K=1$), the consumer unit must add to his initial nonhuman wealth more than what is necessary to offset the exhaustion of his human wealth.[6] Thus whether permanent income remains constant or changes over the lifetime will depend upon the saving behaviour of the consumer unit. Even if K were independent of the level of permanent incomes, as Prof. Friedman maintains, the level of permanent income itself is not independent of K. This has a significance which we shall discuss when we come to consider the particular form of consumption function that Prof. Friedman postulates.

3.5 When we step out of the realm of pure theory and come to the empirical evidence which Prof. Friedman offers in support of his hypothesis, we have a concept of permanent income which has a much shorter time horizon than the entire life span of the consumer unit. Prof. Friedman definitely argues against interpreting permanent income as equivalent to average lifetime value (which he considers the narrowest definition (p. 226)) and transitory income as the difference between average lifetime value and measured income in any specific time period. The dividing line between permanent and transitory components is to be determined from the data for a number of consumer units because "intuitive plausibility gives little guidance to the exact kind of average, or length of horizon"[7] (p. 25) Prof. Friedman does not use the word 'horizon' in the sense of a demarcating point such that a consumer unit does not look beyond it but in the sense of a dividing line between effects he considers transitory and those he considers per-

[6] If the economically relevant life span of a consumer unit is divided between earning span and retirement span, then earning capacity is exhausted by the end of the former. In order that wealth is maintained intact over the entire life span there must be an increase in nonhuman assets which exactly offsets the decrease in human wealth. When the whole of the permanent income in each period is consumed, i.e., $K = 1$, there is just sufficient increase in nonhuman wealth to maintain total wealth intact.

[7] Permanent components of income and consumption being essentially *ex ante*, notional concepts cannot be observed directly for an individual consumer unit. They are inferred from observations for a group of consumer units by making certain assumptions about relations between permanent and transitory components which are discussed below in paragraphs 5·1 to 5·4.

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manent; an event which does not affect consumption possibilities beyond the 'horizon' will not make him alter his consumption pattern. Insofar as Prof. Friedman suggests—although as a highly tentative conclusion—that "the emperically appropriate definition is to regard the permanent component as reflecting the influence of factors affecting income for a period of three or more years" (p. 226), it would mean that a consumer unit is not guided in its decision to spend or save by considerations of his whole lifetime but by those of a shorter time period.[8]

3.6 The concept of permanent income with a short time horizon is, of course, much more reasonable than the lifetime concept. Whatever the significance of the lifetime concept in the world of certainty, where an individual can be presumed to know in advance the entire stream of his future earnings, under conditions of uncertainty the concept ceases to have any definite meaning. Not only is Prof. Friedman's whole discussion of uncertainty far too cursory but he introduces the element of uncertainty in discussing only the form of the consumption function. Yet once we step out of the abstract world of certainty, there is hardly anything permanent left of permanent income. An individual consumer unit can be presumed to have well formed expectations only about the immediate future and any notion that he has regarding more distant future is bound to be too vague to influence his behaviour. Introduction of uncertainty not only has implications for the shape of the consumption function but threatens the very notion of the consumption function (with permanent income as a strategic variable).

3.7 While the concept of permanent income with a short time horizon, which dominates most of Prof. Friedman's analysis, is more reasonable, its implications are far from startling. All that it asserts is that consumers will tend to maintain their consumption inspite of changes in measured income if these are regarded as temporary. It is unfortunate that Keynes, who assigned great importance to the role of expectations in the investment decisions of businessmen, did not take expectations into account in analysing the factors which influence

[8] According to Professor Friedman's connotation, 'horizon' does not imply a cutting off point and a consumer unit does look beyond the horizon. It does not, however, tell us how far beyond he looks, in particular whether an event has to affect consumption possibilities for the rest of the life in order to make him alter his consumption pattern. In this sense there is nothing to tell us whether the concept of permanent income with a longer (i.e. lifetime) or a shorter time horizon is implied. However, insofar as an event is treated as temporary if its effects are spread over less than three years only we are justified in inferring that the concept of permanent income with a short-time horizon is implied. The lifetime concept of permanent income could have been implied *only if* no event was treated as permanent *unless* its effects were spread over the whole lifetime.

consumer behaviour.[9] Once, however, it is admitted that consumers, no less than businessmen, must have a time perspective extending both backward and forward, then it follows that a consumer unit must be evaluating current income in terms of past income and expected income changes. On this basis, it stands to reason that a change in income (from the past income level) that is not expected to continue, is not likely to influence current behaviour. This is also confirmed by empirical findings.[10] Insofar as Keynes focused on current income, considered in isolation from the time perspective stretching both ways, he was forced to explain the rise in the savings ratio with increase in income in terms of stickiness of consumer habits. Considering that there are many felt needs awaiting satisfaction and there is always a possibility of cutting down on some items in the event of income decreases (except at very low levels of income), a 'lag' in the reaction of consumer units to changes in circumstances cannot fully explain the fact. Explicit recognition of expectations provides an additional explanation.

4. *Permanent Consumption*

4.1 Permanent consumption, which corresponds to the concept of consumption implicit in the pure theory, is defined as the *value* of services that a consumer unit *plans* to consume during a period. As such it differs from actual expenditure on goods and services firstly because of addition to or substractions from the stock of consumer goods and secondly because of divergencies between plans and their realisations. Permanent consumption is thus a notional *ex ante* concept and has to be inferred from observed expenditure of a number of consumer units on non-durable goods and services plus current depreciation of durable goods owned by them.

4.2 In terms of household motivations, it seems reasonable to treat accumulation of durable goods as saving rather than consumption. The various motives for saving e.g., desire to bequeath assets to one's heirs, to avoid fluctuations in consumption necessitated by fluctuations in income, to provide a reserve against emergencies etc. can be satisfied by different assets (including consumer durables), although to

[9] Among the "objective factors" which influence the propensity to consume Keynes does mention "changes in expectations of the relation between the present and the future level of income" but asserts that it is only "for the sake of formal completeness". The reason given is "whilst it may affect considerably a particular individual's propensity to consume, it is likely to average out for the community as whole. Moreover, it is a matter about which there is, as a rule, too much uncertainty for it to exert much influence" *General Theory* op.cit. p. 95. There is no *a priori* justification for any of the arguments offered : there is no reason why income expectations should average out for community as a whole ; income expectations need not always be very uncertain, and in spite of uncertainty, expectations may influence behaviour.

[10] See G. Katona—"*Effects of Income Changes on the Rate of Savings*," *Review of Economics and Statistics*, Vol. 31, 1949, p. 95.

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a varying extent. The survey of Consumer Finances data for the United States also show some negative correlation between variable savings (as opposed to contractual savings like life insurance premiums, payments in retirement fund etc.) and spending on durable goods.[11] The purpose of correlation analysis between consumption and income may, however, be to determine the volume of savings which individuals would attempt to accumulate at different levels of income and for which investment outlets would be needed if a given level of income is to be achieved or maintained. In this case, it would be reasonable to include expenditure on durable consumer goods in consumption rather than savings. Expenditure on consumer durables, while adding to a consumer unit's net worth needs no offset from other parts of the economy and is more akin to investment insofar as it does not share the stability of other consumer expenditure. Appropriateness of a concept is after all not independent of the purpose for which the concept is used.

5. *Relation of Transitory Components with each other and with the Corresponding Permanent Components*

5.1 Prof. Friedman is able to clothe his definitional equations (equations i, and ii, in 3.1) with a substantive content by assuming that transitory components of income and consumption, are uncorrelated with one another and with the corresponding permanent components i.e., $\rho YtYp = \rho CtCp = \rho YtCt = O$ where ρ stands for the correlation coefficient between variables designated by the subscripts. These assumptions are an essential part of the hypothesis and are necessary to make inferences about permanent components from observed data for a group of consumer units. Before we discuss these assumptions, it is necessary to bear in mind that their empirical validity cannot be tested from observations for a particular consumer unit but must be judged in terms of the observations for different consumer units at different income levels. "Zero correlation [between temporary and permanent components of income] implies only that the average transitory component [for the group] is the same for all values of the permanent component" (p. 27)[12] Presumably this is also what zero correlation between the transitory components of income and consumption implies.

[11] See G. Katona, "*Variability of Consumer Behaviour*"—*Contributions of Survey Methods to Economics*' by G. Katona, L. R. Klein, J. B. Lansing and J. N. Morgan, Ed. by L. R. Klein, p. 77.

[12] Transitory component reflects the influence of factors regarded by a consumer unit as "chance" or "accidental" occurrences. If all these were independently distributed as between consumer units, then by the law of large numbers, they could be assumed to cancel out i.e. *average* transitory component would be zero. Insofar as there are some factors which are common to all consumer units and there are some chance errors of measurement in statistical data, average transitory component need not be zero.

5.2 Not only does this make the criteria to be used in determining membership in the group very important but it also implies that any relationship derived from cross section or time series data does not tell anything about the corresponding relationship for a single consumer unit.[13] For instance, zero correlation between Yt and Ct for a *group* of consumer units does not necessarily mean that the particular components are uncorrelated for an individual consumer unit. Even if the relationship were to hold for a single consumer unit, it should merely imply that Ct is not systematically related to Yt. This is quite different from saying that marginal propensity to consume out of transitory income is zero. Professor Friedman does, however, discuss the intuitive plausibility of the assumption $\rho CtYt=o$ in terms of "the much cruder test of consistency with casual observation of one's self and one's neighbours" (p. 28), where *by implication* he seems to assume marginal propensity to consume out of transitory income to be zero.

5.3. Prof. Friedman considers this a stronger assumption than the other two, viz. $\rho YtYp=\rho CtCp=o$, which he considers mild and highly plausible. For two reasons the assumption seems implausible particularly at low level of income. To maintain consumption in the face of a temporary decline in income presupposes either existence of assets which can be drawn down or capacity to borrow. Both of these may be negligible at low levels of income and it would be reasonable to expect consumption to decline with a reduction in income even when it is known to be temporary. Even more important is the fact that when existing consumption levels are low (and this would be true for a large number of consumers in underdeveloped countries), any increase in income is likely to lead to an increase in consumption even when the increase in income is not expected to be permanent. In short, under conditions of low levels of income marginal propensity to consume out of transitory income is likely to be nearer unity rather than zero at least for an increase in income even if not quite so near unity for a decrease in income. This does not, however, imply any short sightedness on the part of a consumer unit but suggests that the distinction between permanent and temporary component of income has very little significance at lower levels of income. What is crucial in influencing the behaviour of the consumer units is his total receipts i.e., his observed income and not the permanent component of it.

[13] This is equivalent to saying that rate of change of consumption with respect to income derived from the cross section or time series data cannot be identified with individual marginal propensity to consume. Propensity to consume is a psychological concept, and should refer to the way a particular consumer unit reacts to different stimuli. Income consumption data for different consumer units, often living in different technical and social environment (as in time series data) show reactions of different individuals in relation to different stimuli and can at the most be an indirect index of individual propensity.

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5.4 Let us grant that marginal propensity to consume out of transitory income is zero at higher levels of income. If the whole of the increase in transitory income results in addition to assets, then permanent income must increase. Thus an increase in the transitory component leads to an increase in permanent income. This conflicts with Prof. Friedman's assumption of zero correlation between temporary and permanent component of income, *if the assumption is interpreted in terms of a single consumer unit.*[14] While Prof. Friedman recognises initial assets as one of the factors affecting an individual's permanent income, he ignores the change in permanent income resulting from addition to or substractions from initial assets.[15] If the effect on permanent income of changes in assets is recognised, then there is an internal inconsistency in Prof. Friedman's assumptions that $\rho CtYt$ and $\rho YtYp$ are both zero.

6. *Shape of the Consumption Function*

6.1 Now we come to the most crucial part of Prof. Friedman's hypothesis viz., that the ratio of permanent consumption to permanent income is constant at all levels of income and function of other variables. The hypothesis is derived by considering how under conditions of complete certainty, an individual, with a two year horizon, will apportion his consumption between two years, if he consumes the entire wealth over two years (i.e. terminal wealth is assumed to be zero). Difference in dating has natuarally no significance under these assumptions and rate of interest rather than absolute level of wealth becomes the determining factor.

6.2 This very difference in dating, however, assumes an overriding importance when we consider a more realistic case of a longer time horizon with uncertainty present. Even if there were certainty in every other respect, the very possibility that a consumer unit may not be alive implies that the rate of substitution between consumption in different time periods can hardly be assumed to depend only on the ratio between consumption today and uncertain consumption in future. Add to this uncertainty in respect of income, prices, availability of equally satisfactory consumer goods, and the absolute level of current consumption can hardly be brushed aside as insignificant in determining the ratio of consumption to income. That there is no way of telling

[14] This is not quite fair to Prof. Friedman. As explained above (see paragraph 5·2), zero correlation between Yt and Yp for a *group* of consumer units does not necessarily mean that the two components are uncorrelated for a single consumer unit. The only justification for interpreting the assumption in this way is that Prof. Friedman himself discusses the intuitive plausibility of the other related assumption viz., $\rho CtYt = 0$ in relation to a single consumer unit.

[15] See paragraph 3·4 above. Any increase in measured income must raise permanent income to the extent of transitory component (minus any increase in transitory consumption) and that part of permanent component which is not consumed (i.e. to the extent that K is less than unity).

how different consumer units react to the presence of uncertainty, in particular whether they save more or less as absolute wealth increases, does not justify dismissing uncertainty as establishing "no presumption against the shape assigned to the consumption function" and casting "no shadow on the "simplicity" that recommends it" (p. 15). A theory of behaviour under certainty by its masterly *tour de force* of simplification might provide a scheme of thought which enables us to find unity and order in the data which are varied and often chaotic. Yet even in its more extended form, where uncertainty is not denied but an economic unit is assumed to act *as if* it believed that particular consequences of an action would occur with certainty, it fails to provide an ultimately satisfactory treatment of the problem of behaviour under uncertainty.

6.3 Let us, however, go along with Prof. Friedman in ignoring the effect of uncertainty on the shape of the consumption function. There is still another route along which one could question Prof. Friedman's hypothesis of constancy of savings ratio with a change in permanent income. Insofar as K is not assumed to be constant even for the same consumer unit but is suppposed to be influenced by the three variables i, w, and u, if any of these factors is affected singly or jointly by a change in permanent income, then the influence of permanent income has to be admitted, even if the influence is exerted indirectly.

6.4. It is plausible to think of two ways in which permanent income may influence K indirectly: the effect of permanent income on the rate of return and on the preference of the consumer unit between present consumption and accumulation. While Prof. Friedman dismisses the element of uncertainty as requiring no modification in the shape assigned to the consumption function, he admits that uncertainty provides another motive for holding wealth, viz., a reserve for emergencies (i.e. K is likely to be larger under uncertainty than under conditions of certainty, although constant at all levels of permanent income). Greater importance is attached to nonhuman wealth because it is generally easier to borrow on the basis of a tangible physical asset than future earning capacity; the fraction of permanent income derived from nonhuman wealth (i.e. for a given rate of interest, the ratio of nonhuman wealth to permanent income) is therefore an important factor determining current consumption. Taking this line of reasoning one step further, possession of liquid assets, which makes a consumer unit self reliant and reduces the need to borrow in the event of an emergency should be preferred to physical assets. At lower levels of permanent income (not so low as to make attention to the future difficult because of the urgency of immediate demand), the total volume of assets accumulated being small, liquid assets may predominate and the average rate of return may be small. With a rise in permanent income and an increase in the size of assets (even if K is constant, ab-

solute size of assets would be larger), a consumer unit is enabled to secure a more balanced composition of his asset 'portfolio' and is thus able to earn a higher average return on his total assets without sacrificing liquidity. If Prof. Friedman admits a positive correlation between rate of return and savings[16] then to the extent that a rise in income raises the average rate of return that can be earned, K is affected by permanent income through i and composition of w.[17]

6.5 The variable u represents factors affecting a consumer unit's tastes for current consumption versus accumulation. Are preferences in this respect immutable? If they do change over time, does change in income play no part in causing changes in preferences? By assuming terminal wealth to be zero in the illustration he uses for deriving his hypothesis, Prof. Friedman has excluded one significant motive for saving, viz., desire to add to the estate for the benefit of one's heirs. Once this particular motive for saving is admitted, is it possible to argue that all consumer units feel equally responsible to make provision for the next generation regardless of the initial human and non-human wealth they possess? In other words, regardless of the level of income, is the same fraction of the initial wealth passed on to the next generation? As permanent income rises an individual unit is exposed to the 'demonstration effect' not only of the consumption pattern appropriate to his new social milieu but also of cultural values. A greater awareness of the need to provide for the next generation (through both human and nonhuman wealth) is quite likely to be created by the increase in the ability to make such provision. Here we have another instance where permanent income may affect K, this time by altering u.

6.6 But could there not be another motive for saving, viz., to enjoy a gradually increasing expenditure since it satisfies a common instinct to look forward to a gradually improving standard of life? If, as argued earlier, permanent income depends on K (even if K were independent of permanent income), the desire to have a rising permanent income would require larger savings the later the age at which a particular level of permanent income is enjoyed (because of the smaller number of years available to accumulate) and the higher the

[16] While Prof. Friedman attributes the higher value of K for entrepreneurial units as compared with other units to their being subject to uncertainty with respect to their income, he explains the higher value of K for nonfarm entrepreneurs than for farm entrepreneurs in terms of the larger return (on the average) which the former are able to earn through direct investment in their business.

[17] Survey of Consumer Finance data for the US show that while certain kinds of assets e.g. owner occupied homes, life insurance, automobiles and liquid assets, are widely distributed, investments in real estate, business, and securities are held in substantial amounts exclusively by high income groups. The higher the income, the more frequent is, of course, the ownership of every asset. See G. Katona, *Psychological Analysis of Consumer Bahaviour*, pp. 122-124.

level of permanent income enjoyed at a particular age, larger K will have to be than if the level was lower.

7. *Conclusion*

7.1 Listing of the possibilities when permanent income may not be strategic, or when factors not considered by Prof. Friedman may alter the shape of the consumption function, can be no more than suggestive. Ultimately it is the relative importance of various factors that would settle the issue. Still it is difficult not to feel a certain sense of uneasiness regarding the theoretical structure which is made to carry the weight of the hypothesis. Prof. Friedman has been able to make permanent income strategic by underestimating the difficulties created by imperfection of the capital market; on the other hand he has been able to postulate constancy of K at all levels of permanent income by ignoring that uncertainty may turn the scales in favour of provision for the future, once what psychologists call the "role of the immediacy of forces" weakness. Even in the absence of uncertainty, the conclusions regarding the shape of the consumption function seem to be conditioned by the fact that the motives for saving are rather narrowly specified. Finally, to the extent that K is not assumed to be constant even for the same individual but is supposed to be influenced by i, w and u, the possibility of permanent income influencing K via any of these three variables cannot be ignored.

7.2 Prof. Friedman has himself argued that choice among alternative hypotheses equally consistent with the available evidence must to some extent be arbitrary, though "simplicity" and "fruitfulness" should be relevant consideration. The permanent income hypothesis certainly meets the test of fruitfulness insofar as it has suggested promising directions for further empirical research and is bound to stimulate thinking in new directions. It is doubtful if it meets the test of simplicity equally well, even though Prof. Friedman considers the permanent income hypothesis superior to alternative hypotheses on this count. In the absence of constancy of K, the simplicity of the hypothesis is more apparent than real. The permanent income hypothesis cannot avoid the multivariate explanation of consumption which Prof. Friedman decries. The problem of finding the major determinants of K and measuring their influence remains to be solved. The search for *the* consumption function is yet not over.

Bombay K. R. RANADIVE

ECONOMIC DEVELOPMENT WITH SURPLUS LABOUR*

In the rapidly accumulating literature on underdeveloped countries, a new thesis has been emerging for some time and which in fact has now become quite familiar. It is contended that an underdeveloped economy has a certain advantage in that it has large reserves of unutilised or underutilised man-power by utilising which it is possible to step up capital formation, without drawing away, to any large extent resources employed in the production of consumer goods. Underemployment is thus said to constitute a large investment potential. This discovery is hailed with as much gusto as the unearthing of a 'hidden treasure.' In fact this resurgent interest in underemployment has been stimulated, at least partly, by the practical necessity of setting out guide-posts for governments engaged in programmes of development. The primary purpose of this paper is to evaluate the major thesis of this approach in the light of practical considerations.

The thesis put forth by Nurkse[1] that the state of disguised unemployment implies a disguised savings potential as well, is familiar enough. More recently, on this concept of savings potential as concomitant of disguised unemployment, Professors Vakil and Brahmanand have built a theory of economic growth.[2] According to them, planning in an underdeveloped country, if it is to be effective, must take account of the disguised unemployment of the subsistence sector and make full use of the savings potential that is associated with it. The process can be initiated only if the increase in the volume of employment in the planned sector is made to exceed the addition to labour force consequent on the growth of population. This bald statement of the proposition is merely intended to be a starting point for discussion. Interestingly enough, at least in its broader content this thesis is finding increasing acceptance at the hands of the theoreticians and the planners. The application of fairly sophisticated economic theory tends to create the impression that we have now opened up in such economies, new possibilities of investment which were unappreciated or unexplored so far.

* This is a part of the Paper on "Surplus Labour, Savings Potential and Development Planning," prepared at the Agricultural Economics Research Institute, Oxford, during the year 1959 when the author held a Nuffield Fellowship.

[1] Nurkse, Ragnar—Problems of Capital Formation in Underdeveloped Countries, Oxford, 1953.

[2] Vakil, C. N. and Brahmanand, P. R.—*Planning for an Expanding Economy*, Bombay, 1956.

II. Redistribution of Land

Since the principal elements of the phenomenon of underemployment were set out in considerable details in my earlier article, I begin here directly with the concrete treatment of the problem.[3]

In India the position of disguised unemployment is stated as follows : "There appears to be an agreement on the broad conclusion that under existing conditions, if cultivating units were to approach what might be described as family holdings affording the possibility of fairly full time work in agriculture for a family of average size, agricultural production could be maintained with about 65-75 per cent of the number of workers now engaged in it. In other words, on certain assumptions, one-fourth to one-third of the existing labour force in agriculture may be surplus to its requirements."[4]

The most important point to be noted here is that the estimate of the surplus only indicates potentialities and not actualities that can be readily acted upon. The 25 to 35 per cent of the surplus labour is not readily available to take up any work, even if provided. Any programme of full employment in such a situation can be planned only in micro terms, rather than in macro terms. Further, the translation of the potential surplus into actuality, that is, the segregation of surplus labour force, will involve comprehensive and detailed planning of all phases. To start with, for each village a standard holding may have to be designated—a holding which, under the existing conditions of techniques, provides full employment for a family of average size working with such assistance as is customary in agriculture. Having designated the size of the standard unit, the next step would be to treat this standard holding as a "unit of floor" to be applied. If this concept of floor is properly applied, its fixation gives the number of farmers who are affected by disguised unemployment, that is, all those cultivating holdings less, in size, than the standard unit.

Further, it would be necessary to pool all the holdings of these "small farmers" cultivating holdings smaller than the standard unit and regroup them into as many standard holdings as possible. Some of the former small farmers can thus be rehabilitated on these reconstituted units. After this process of regrouping and reallocation is complete, a considerable number would still remain to whom no land is available. These families who thus stand "uprooted" from the land now become a visible surplus and hence the process involved in making this surplus visible can be viewed as a process of conversion of disguised unemployment into open or overt unemployment. Thus,

[3] Some Aspects of Underemployment—*Indian Economic Journal*, Bombay, July, 1957.

[4] *Second Five Year Plan*, Planning Commission, Government of India, 1956.

for consolidation of holdings and for pooling together land of small farmers, a general redistribution of land surface in the village may have to be undertaken. Again, such consolidation and regrouping of holdings is the measure of reorganisation which is a pre-requisite for the emergence of surplus labour in any meaningful sense of the term.

When theoreticians speak of disguised unemployment constituting savings potential, they seem to beg the whole question of appropriate redistribution of land. While surplus labour undoubtedly exists in the sense that the aggregate output in such economies is likely to remain unaffected by a withdrawal of part of the labour engaged in agriculture, this labour is not unemployed and cannot be easily drawn upon for employment on investment projects.

Implicit in the above statement is another significant fact namely that though the productivity of a considerable part of the working population may in effect be zero, the supply price of labour is likely to be quite high even in such economies. Men will not leave the family farm to seek employment if the wage is worth less than what they would be able to consume if they remained on it. Though earnings in the subsistence sector set a floor to wages elsewhere, in practice wages will have to be higher than this to wean away the farmer from his farm. There is usually a gap of 30 per cent or more between the subsistence earnings and wages paid elsewhere. In fact, it is doubtful whether mere wage incentives will be enough to siphon off the surplus labour. More of it later.

III. Institutional Implications

The process of stepping up capital formation has been visualised partly as one of ploughing back increases in output after allowing for the consumption requirements of the annual addition to population and partly as one of mobilising idle or underutilised manpower. Viewed either way, the problem is tied up with institutional considerations. In the discussion of disguised unemployment the institutional implications of the situation have not received adequate attention, and, to that extent, the whole approach to the question of employment and capital formation lacks a material basis. Again, consideration of these factors *is not* incidental to the issue ; but it sets the entire context to it, in view of the fact that disguised unemployment is in effect an institutional phenomenon.

The concept of mobilisation of surplus labour, though logically valid, begins to look entirely different when one enters the theatre of operations. The severity and speed of economic and concomittant social changes, which the process of throwing up surplus labour, as described in the previous section, necessarily entails, is such that it

seriously limits the practical value of such a programme. In the peculiar set up of an agrarian economy like India, the difficulties of launching upon such a plan are so tremendous that it can hardly be regarded as practicable.

IV. Income and Standard of Living of the Disguised Unemployed

One of the assumptions of those who see the savings potential in disguised unemployment is that the marginal propensity to consume of the farmers who are relieved of the responsibility of supporting the disguised unemployed, will be either zero, or very small. Further, another implicit assumption is that the disguised unemployed when employed on new jobs will continue to consume the same amount as before or slightly more. Both these are highly doubtful assumptions. The main burden of this Section is to show that even if any government were bold enough to carry out such a programme of reorganisation of agriculture, the savings potential supposed to be concealed in such a release of surplus population may prove to be a theorist's illusion.

In a society where the only form of unemployment relief is the charity of relatives and friends, a man must scratch up a living somehow or other by means of his own efforts. Particularly in agriculture, it is the family rather than the individual which is the employment unit; and the family also acts as a pool into which all earnings of members flow and from which each individual gets a share not according to his contribution to family occupation but according to his needs. That perhaps explains, how, in spite of disguised unemployment telling heavily upon the levels of income, members of family continue to eke out an exiguous living from land.

In such a situation, the assumption that one could withdraw, along with the surplus labourer, the wage-goods he was consuming in the family, though logically valid, is hardly realistic. In fact if bare subsistence in the existing situation is itself any indication of potential surplus of food or wage goods, one might as well argue that such a surplus could also arise in the case of those who are *totally unemployed* but who continue to maintain themselves during the period of unemployment, in spite of the absence of any kind of dole. Even an unemployed person does not live on air. What matters for the present purpose is not how such a totally unemployed person manages to subsist, whether by depending upon his relatives, or by resorting to loans or by eating his capital, but the patent fact that he continues to exist. If it is unrealistic to speak of the release of the food or wage-goods consequent on such a totally unemployed person finding employment, it is almost equally so in the case of the disguised

unemployed. The surplus which conceptually does arise in both the cases is merely notional. In fact it would appear that in this respect the distinction between disguised unemployment and open unemployment is often too sharply drawn. In the rural occupational structure they are not necessarily distinct and separate entities. In practice very substantially one merges into another ; agricultural labourers also own and cultivate land and cultivators take to wage-paid employment.

The validity of this argument can be demonstrated with the help of data relating to levels of income and standard of living of farmers substantially affected by disguised unemployment. Though no directly relevant data are available an attempt may be made to reconstruct the picture with the help of some recent investigations into the rural economy.

Size of Farm Enterprise

The first interesting aspect would be to look into the size of family farm enterprises. The All-India Rural Credit Survey furnishes data relating to the value of gross produce which may be taken to indicate the size of farm business.[5] Here data relating to lower strata of cultivators with small holdings may be taken to broadly indicate the levels of farm incomes of farmers substantially affected by disguised unemployment.

It is clear from the data that the value of gross produce for 30 per cent of the selected cultivating families was less than Rs. 200 per family and for 20 per cent it was between Rs. 200 and Rs. 400 per family. Making an allowance for total underestimation of the order of even 50 per cent the result of all farm business gives a value of gross produce of the order of Rs. 600 or less per year, per family for nearly *half* of the country's cultivators. These figures which express value of *gross* produce and *not* net income, are a sufficient indication of the alarmingly low level of incomes of such farmers.

Further, it was revealed that those reporting value of gross produce less than Rs. 200 reported total farm expenses which *exceeded* the value of their gross produce and those with the value of gross produce between Rs. 200 and Rs. 400 reported total farm expenses that were on an average only Rs. 60 less than the average value of gross produce.

It was therefore concluded—"Making all allowances for errors in reporting etc., it is clear that the cultivators included in these groups earn little, if any, net cash income through their farming activity and

[5] All India Rural Credit Survey, Vol. I, the *Survey Report*, Reserve Bank of India, 1955.

the main advantage derived by them from farming is some contribution in kind to family living."

The current income is not even sufficient for maintenance and hence cultivators have to incur debts for consumption. The total borrowings of all families were distributed as follows among the main purposes.

TABLE I

Borrowings of Farmers

Purpose of Borrowing	*Percentage to total*
Capital Expenditure on farm	27·8
Current Expenditure on farm	9·3
Non-farm business expenditure	6·6
Family expenditure	50·2
Other expenditure	5·7
More than one purpose	0·4
Total	100·0

If the first three items are considered as productive expenditure then such expenditure accounts for 43.7 per cent of the total borrowing, while those which might be termed unproductive accounted for 56.3 per cent or the major part of the total borrowings. Interestingly enough family expenditure alone accounted for more than 50 per cent of the total borrowings. More important is the fact that as we move from the big cultivators to the small cultivators[6] the *increasing* importance of family expenditure as a purpose of borrowing is clearly discernible. While for the big cultivators the largest concentration is found in the class interval 20 to 50 per cent, for the medium cultivators similar concentrations are found in the class intervals 40 to 70 per cent. For the small cultivators the concentration is in the class intervals of 60 to 70 per cent or above. Thus about 70 per cent of borrowings of the small cultivators is meant to meet the current needs of consumption.

[6] The cultivating families were arranged in descending order of the size of their cultivated holding and grouped into deciles. The cultivators in the first decile, the next 3 deciles, the middle 4 and the last 4 deciles are referred to as the big, the large, medium and small cultivators, respectively.

Investment and Disinvestment

This imbalance, in turn, leads to a net disinvestment on the part of the medium and small cultivators. The following table gives the overall average amount invested or disinvested per family for the four classes of cultivators.

TABLE II

Investment of Agricultural Families

(Rupees)

nvestment or Disinvestment	*Big Culti-vators*	*Large Cltivators*	*Medium Cultivators*	*Small Cultivators*
Investiment per family	(This includes capital expenditure in agriculture and in non-farm business, financial investment expenditure and repayment of old debts).			
Total	882	530	189	99
Desinvestment per family :				
1. Borrowings	528	357	173	111
2. Sale of assets	140	95	45	32
Total	686	452	217	143
Net Investment (+) or Disinvestment (—) per family	+213	+78	— 28	—44

Thus, while for the big as well as large cultivators the balance shows a net investment position, for the medium and small cultivators a net disinvestment position is shown.

Another important study from which some glimpses into levels of income and standards of living of such farmers can be had is the All-India Agricultural Labour Enquiry conducted in 1950-51. This enquiry defined agricultural labourer as a person who reported that he or she was engaged in agricultural operations as a hired labourer for wages for 50 per cent or more of the total number of days worked by the person during the previous year. The result has been that 50 per cent of those who were classed as labourers were cultivating land as owners or as tenants ; and therefore the data could be taken to represent broadly the conditions of those farmers who are most affected by disguised unemployment. According to this classification agricultural labour families alone accounted for 37 per cent of all agricultural families.

The All-India average annual income per agricultural labour family was Rs. 447 and the average annual expenditure Rs. 461. There was thus a deficit of Rs. 14 due to consumption expenditure

alone. Perhaps much the more significant revelation of the investigation is in regard to cereal consumption. For the purpose of studying in greater detail the existing standard of living among those families, the Enquiry classified them into a number of classes based upon what have been called "Economic Levels of Living." The economic level of living of a family is determined by the consumer expenditure per consumption unit in the family where consumer units are calculated by taking its adult male members as full units and converting other members on the basis of their relative calorific requirements. Using the relative coefficients suggested by Lusk, they have presented the data reproduced in Table IV. (See Appendix).

An analysis of the intake of cereals in diffirent levels of living throws up a significant feature. Taking the Indian Union as a whole and the four adjacent levels, viz., Rs. 51-100, Rs. 101-150, Rs. 151-200 and Rs. 200-250, which accounted for 24.4, 36.0, 19.5 and 9.0 per cent of families respectively, the average *per capita* consumption of cereals recorded a steady rise from 11.0 ozs. in the lowest level to 19.8 ozs. in the highest. Similar trends were noticeable in each of the six regions (Census Zones) and some major states, as can be seen from the table.

The consumption of pulses was small. Even so, the quantity consumed per consumption unit or *per capita* increased with the rise in the levels of living. The consumption of pulses per consumption unit per day in the four important levels of living mentioned above, rose from 0.5 to 2.1 ozs. the corresponding *per capita* figures varying from 0.4 to 1.7 ounces.

Of course, one would certainly expect substandard consumption in respect of what are called protective foods. But the results of the Agricultural Labour Enquiry are more disturbing because they show in unmistakable terms that the consumption of foodgrains and pulses by families with low consumer expenditure is considerably below the consumption by families, living side by side, with somewhat higher consumer expenditure.

These families, for want of income live on diets *quantitatively* inadequate and thus probably remain underfed even in respect of staple foodgains. Here also, one might imagine, that cultivation of land-holdings however small, would make considerable difference to their standard of living. This does *not* seem to be so and in fact there is apparent little difference in the standard of families with and without land. Hence whether judged by income levels or by economic levels of living the families of small cultivators do not show any difference.

The main conclusion that emerges from these some what disjointed data is clear enough. The majority of farmers affected by disguised unemployment belongs to the lowest income group. The budgets of these farmers are precariously poised on the precipice of expulsion in the sense that any major disturbance in the existing situation is likely to throw them out of agriculture into the rank of the landless and the overtly unemployed. In fact, here a *permanent* tendency of consumption to outrun production is definitely discernible. The possession or cultivation of a piece of land does not make the position of the disguised unemployed in any way superior to that of the landless. The only virtue of agriculture seems to be that it acts as some sort of social insurance against overt unemployment, in so far as its institutional framework permits the sharing of available employment and income amongst an unusually large number of persons.

In such a situation if surplus labour is removed from land and employed on, say, construction works, their consumption is likely to expand by the full amount, or very nearly the full amount, paid out in additional wages. Studies made especially to show how incomes earned on development projects are spent, plus other studies of the relation of income level to expenditure level, indicate that the proportion of project wages, i.e. project labour costs, used for increased purchases of foods would probably average about 40 to 45 per cent in India.[7] On the other hand, one can reasonably expect a rise of about the same order, on the part those who remain on land ; because, as we have seen even in the matter of staple foodgrains their consumption is deficient. Consequent on the departure of the surplus labourers, their income-levels would increase and with it this pent-up demand for food or wage goods is bound to express itself fully. Hence this two-pronged increase would leave a very thin margin of the so-called surplus.

At any rate the process of 'saving the output' requires a high marginal rate of saving with savings accumulating at certain points in the system. This does not certainly take place automatically in an economy in which per capita income and savings are low. Alternatively, some writers recommend that the objective of policy should be to prevent the farmer who has been relieved of the burden of supporting the disguised unemployed and the newly employed worker, from increasing their consumption. It is inconceivable that this kind of rigorous regulation of consumption would be executed by methods other than dictatorial. In the context of democratic planning this approach loses much of its meaning and relevance.

[7] Uses of Agricultural surpluses to finance economic development underdeveloped countries—*A pilot study in India*, F.A.O., Rome, 1955.

There is a more fundamental objection to such an approach. Forced savings may certainly be a good prescription for obtaining the necessary investment for development. But it is difficult to see why this particular section of the population affected by disguised unemployment, and not any other in the economy, should be selected for the purpose. Nor is there any reason to suppose that this particular strategy is the best way of obtaining the forced savings or that the amount so obtained is the optimum. The plea for forced savings of this kind appears rather paradoxical in that it aims at improving environmental conditions, while keeping down the consumption at sub-standard level; and this at a time when the importance of improving the 'quality' of the people as productive agents is increasingly being stressed.

Moreover, this line of reasoning, as it will be made clear in the next section, takes a too static view of the situation and hence distorts, to that extent, the whole approach to development planning.

V. Growth Potential in Agriculture

Look at from another angle, and this seems to be the appropriate way, it is clear that as it is difficult to keep the consumption of this class at the present level, an increase in the capital formation requires an increase in the wage-goods output. A large volume of employment inevitably means a large wage-bill and in so far as mobilisation of idle manpower implies enlargement of the aggregate wage-bill, the scope for enlarging the wage bill is conditioned by the availability of strategic wage-goods. This is somewhat like the classical assumption of lack of 'circulating capital' being a more serious obstacle to expansion than lack of fixed capital.

Technical Base for Expansion

Even from the employment point of view, therefore, the question that needs to be first answered is : What are the prospects of increasing agricultural production? Indeed the best hope of raising the employment and income levels appears to lie in the fact that the backwardness of the agricultural techniques and practices makes possible spectacular advances in production at relatively low cost. It is now becoming increasingly evident that the technical basis *does* exist for an impressive increase in crops yields, by building up soil fertility, irrigation, improved varieties of seeds, application of manure and fertilisers on a large scale and adoption of other improved farming practices. Let us examine the growth potential in more concrete terms.

Among the important reasons for the low yields in India is the deficient balance of plant nutrients in the soil; from time immemorial India has been cropped with very small replacements of plant nutrients.

India is not poor in livestock with about 158 million cattle. But manures are used mainly for fuel rather than for application on fields. It is estimated that manures, mostly from cattle, amount to more than 800 million tons, but of this 300 million tons are used in a dry state as fuel and about 160 million tons, or about 20 per cent, are wasted on hillsides and roads. If thus all the 300 million tons are used as manure, this factor alone would result in an additional production of 9 million tons of grains. The main difficulty is to eliminate the use of manures for fuel. Attempts are being made to suppply villagers with seeds of quick-growing trees so that these fuel plantations might provide the alternative. Another ingenious suggestion is to popularise the erection of 'gas plants' which will supply gas from the dung without destroying its manurial content.[8]

The use of sewage and garbage and the preparation of compost are not as developed in India as in Japan and China. By 1949-50 the Indian Union had, 102,838 compost centres, 1015 classified as urban, and total compost production of 5,680,000 tons, of which 1,200,000 tons came from urban centres. Thus the production of about 5½ million tons is only a fraction of the potential. Japan, with a much smaller population produces around 50 million tons of compost yearly.[9]

The problem of raising agricultural yields is closely related to that of increasing the nitrogenous content of the soil, an element defficient in nearly all parts of the country. Even at the present level of production the major crops in India remove over 3.77 million tons of nitrogen from the soil, while the actual quantity available for application to crops by way of cattle manure, composts, green manure, oil cakes and inorganic fertilisers is less than a million tons and the balance is made good by crop residues and natural recuperative processes. Of all the sources of nitrogen, green manure and rural composts have distinct possibilities of wider application within the resources available. In spite of the findings of research workers all over India about the part played by green manures in improving crop yields, the practice has not made much neaaway except in Madras

[8] The Indian Agricultural Research Institute has perfected a simple village model of the cow dung gas plant. It produces combustible gas for cooking and lighting at negligible cost. The cost of a plant, sufficient for a family of five, is about Rs. 350/-; there is no expenditure on maintenance; 100 cubic feet of gas which is daily needed to cook three meals and for lighting could be obtained from 100 lbs. of fresh dung. The fertiliser potential of the dung is not at all reduced. See *Agricultural Situation in India*, Delhi, July, 1959, p. 336.

[9] In an interesting article Mr. Idnani calculates that India's population of about 400 millions could provide annually about 1·7 million tons of nitrogen, 260,000 tons of phosphoric acid and 320,000 tons of potash from human urine. Assuming efficient collection of urine a unit of 10,000 people could produce sufficient manure for 5,000 acres—See Scope for the Utilisation of Human Urine as Manure, M.A. Idnani, *Indian Farming*, January 1957.

State. Barely 10 per cent of the potential 100 million acres is green manured. The chief difficulty in spreading its use has been the non-availability of seeds in quantity required. A new method which has already shown its results in parts of the Southern States seems to overcome this difficulty. Mr. Sivaraman, Adviser to the Planning Commission,[10] argues that both from the point of view of cost and time, organic manures have out-weighing advantages over fertilisers. While it takes about 3 years to set up a fertiliser factory costing Rs. 18 crores and involving a capital outlay of about Rs. 23 per acre of crop manured, plus Rs. 16 per acre every year towards the cost of the fertiliser, organic manures for an acre of paddy or wheat field can be grown in 4 to 6 weeks with the help of seeds raised in one line in the proceeding season along a portion of the borders of the field from a nucleus packet costing 5 naye paise (i.e. Rs. 0.05). Except in certain problems areas, the average yield of cereals can be doubled by this method, even without fertilisers. In fact Kerala trials have established that indegenous varieties of rice respond better to green manure than to fertilisers and that yields upto 3500 lbs. per acre, as against the average yield of about 800 lbs. could be obtained without the aid of fertilisers, if adequate quantities of suitable green manure are used. In a situation of extremely low incomes of farmers, who cannot afford to purchase fertilisers, even presuming they are produced in sufficient quantities, this method seems to throw open great possibilities.

The lack of nitrogen is also one of the reasons, in addition to the need for resting the fields and for moisture storage, that a very large area lies fallow. Of the 320 million acres of net sown area 58 million acres are reported under fallow.

India is also fairly well-off in bone resources which are a valuable source of phosphatic manure. According to a recent report, nearly 3.6 lakh tons of raw bones valued at Rs. 7 crores are available in the country.[11] At present only 1.36 tons or roughly one-third of the estimated available quantity are actually collected and utilised for manure ; the rest are allowed to go waste, merely for want of organised effort to collect them.

Adoption of improved seeds is another method by which it is possible to increase the yield by 20 to 30 per cent with hardly any additional investment. Apart from the more spectacular Japanese method of paddy cultivation, where, with some additional investment on manure, the *net* gain is about three times greater compared to the local transplanted method, research workers in India have evolved new

[10] See his Note in the Report of the Team for the Study of Community Project and National Extension Service, Government of India, Vol. II, November, 1957.

[11] *Agricultural Situation in India*, New Delhi, March, 1959, p. 1070.

strains of crops and plants to suit local conditions. Here also the main difficulty is that extension of improved varieties to cultivators lies far behind. In many States the use of improved seeds, except in the case of cotton and sugar-cane, has not spread to more than 10 to 20 per cent of the area for which the strains have been evolved.

The potentialities from the effective use of nitrogen alone are tremendous. A moderate dressing of 30 kilogrammes[12] of nitrogen per hectare the experiments suggest, would produce an increase of more than 10 million tons of rice per year. In 1955 the consumption of nitrogenous fertilisers was only 10,000 tons and this is proposed to be stepped up to over 1.8 million tons by 1961. Rough calculations indicate that India may be able to use without any difficulty upto 15 or 16 million tons of sulphate of ammonia per year. In other words it can consume the production of 40 or 45 factories of the size of Sindri Fertiliser, which has a capacity of about 3,50,000 tons per year.

In Rajasthan, an arid and desert region, a substantial increase in production could be brought about through conservation of rain water by permitting it to percolate in the soil by bunding with sand. This method is said to have large potentialities.

In extension work the contribution of dry farming techniques has not yet received sufficient attention. At present hardly about 18 per cent of the area is irrigated and despite the scale on which irrigation programmes are being undertaken, a large proportion of lands will continue to be rainfed. Hence the importance of wide-spread adoption of the best dry-farming methods can hardly be over-emphasised. In particular, both for the conservation of water and soil, contour bunding needs to be encouraged. As a rule, it can be undertaken by local labour with some assistance and guidance from trained agricultural personal. During the second plan period contour bunding operations are expected to be carried out in an area of about only 1.5 million acres.

Transitional Factors Hindering Growth

In spite of these great potentialities, the question naturally arises, why has it become necessary to import about 3 million tons of food grains annually, even after the successful completion of the First Five Year Plan ? That there was a deplorable short-fall, both financial and physical, in the performance of most schemes for increasing production, is highlighted by the Foodgrains Enquiry Committee. It is not necessary to discuss the causes here. However, the most glaring instance was the failure to make full use of irrigation potential created

[12] What Constitutes Rural Over Population ? Colin Clark, *Proceedings of th World Population Conference* (U.N.), Vol. V, Papers 1954.

by the major irrigation projects in different parts of the country. Then again, land reforms seem to have affected adversely agricultural productivity and capital formation, at least at this transitional stage.

VI. Priorities in Development Planning

Employment Versus Productivity

For the purpose of development planning the employment problem can be said to have two facets. There is, in the first place, the need to make the maximum possible use of idle labour for the purpose of development. The second aspect of the problem is that of increasing the productivity of labour so that larger employment can be provided at rising levels of income. Thus both absorption of idle manpower and higher productivity have to be made important elements in development planning. But these two elements do not always move in harmony and in fact, there may be in the initial stages, at any rate, an apparant conflict between the need for making the maximum use of manpower and the need for raising productivity. Assuming that in the initial stages, employment considered as an end in itself comes into conflict with conditions essential to the more rapid pace of development, factors responsible for such a conflict, should be clearly understood in order to make an informed choice between the alternative ends of development and employment. Let us analyse the situation in more concrete terms.

How large would the investment be, if the aim is to bring about full employment in the rural sector ? Some idea of the dimensions of outlay needed could be had for agricultural labourers who, by definition, included the small farmers affected by disguised unemployment. On the basis of the data available from the Agricultural Labour Enquiry, Professor Dandekar estimates that a total development expenditure of Rs. 500 crores would be needed annually, even if incurred on the most labour intensive schemes, if every earner in the agricultural labour family is to be provided with employment fetching Rs. 350 annually.[13] This may mean that the person gets employment for 350 days of the year at an average wage of Re. 1 per day or, for 200 days at Rs. 1 per day *and* for 100 days at Rs. 1-8-0 per day. Though in itself a modest employment target to aim at, the outlay necessary is so large, in fact slightly larger than the *entire* annual outlay of the First Five Year Plan, that it could hardly be considered as attainable. Nor is this all. Not all the cultivators affected by underemployment are included in the estimate. The point is that full employment of the underemployed cannot be made the sole aim of the development planning.

[13] *Use of Food Surpluses for Economic Development* V. M. Dandekar, Poona, 1956.

In fact in framing a programme of development there are a large number of decisions about investment which may have to be taken independent of employment considerations. This is not the place to discuss what have now come to be known as investment criteria for development. The real question is to explore whether, even *after* the overall rate of investment as well as the broad pattern of investment have been determined, it is possible to give an employment bias to planning.

Bias for Employment

But before we consider some of such alternatives, we may as well answer the question why this bias for employment? Disguised unemployment, though shorn of the so-called savings potential, has yet a point to make. The small farmers constitute a disadvantaged class in the sense that their level of income is too low to even provide them quantitatively adequate staple food grains. Further, it does not appear from recent enquiries that these low standards have been affected to any material extent by processes of planned development initiated in the country. Data from the Rural Credit Survey substantiate the fact that it is the relatively bigger—fully employed farmers who largely benefit from these measures. Thus the process of development seems to have by-passed this weaker section of the rural population. If the claims of the more disadvantaged classes are to be regarded as paramount, any plan of national development should give prior attention to their requirements. Personal labour of the families constitutes the chief productive resource of such families. Hence the best way of helping them to improve their levels of living is to provide full employment to them.

Three Ways of utilising Surplus Labour

The possibility of making the maximum possible use of unutilised or under-utilised labour therefore needs to be explored. There seem to be three lines along which this can be done : (a) substitution of labour for machinery in capital projects to the extent that it can be done without increasing the costs ; (b) assignment of priority to labour-intensive over capital-intensive projects in so far as this is feasible, and (c) attraction of voluntary labour into development fields on an unpaid or partially paid basis.

Of course, we have all along emphasised that an increase in the production of wage-goods is a pre-requisite to the expansion of employment opportunities and in so far as this necessitates additional investment in agriculture those schemes would naturally receive precedence over the employment-expansion programmes.

Even in this regard there seem to be no unfailing guide. For instance, if the aim is to secure a certain increase in agricultural production, there might be two or more courses open, say, by irrigation or by use of fertilisers. While irrigation may mean an increase in the employment content of land as well as in output, the use of fertilisers may secure a increase in out-put without necessarily increasing employment, at any rate, to the same extent. Here if one is to be guided by cost criteria, fertilisers seem to be less costly. To produce an additional ton of grain by the use of fertilisers requires capital of about Rs. 300, excluding the share of operating and transport costs. On the other hand, to produce the same quantity by irrigation may mean irrigating an area of about 1½ acres. It is highly doubtful if this area could be irrigated with a capital of Rs. 300.

This line of argument, of course, presumes that adequate quantities of fertilisers could be produced in the economy. Professor Mahalanobis,[14] in an interesting article, calculating the various alternatives, comes to the conclusion that it is cheaper to import fertilisers than importing food grains directly ; and further, it is still cheaper to install fertiliser factories than importing fertilisers. But installation of fertiliser factories is bound up with the larger question of availability of foreign exchange. This example is cited merely to indicate how difficult it is to be guided by any one theoretical formula for deciding the investment pattern.

Even supposing the investment allocation for the development of irrigation and the alternative technical possibilities are given, how are the different projects to be chosen ? Take, for instance, the alternative between major and minor irrigation. We will later show that minor irrigation works have a larger labour-content than the major ones., In regard to costs, Prof. Clark,[15] analysing the costs of different kinds of irrigation schemes, comes to the conclusion that well-irrigation is much cheaper than major works like the Bhakra dam. The cost per square kilometre at the Bhakra dam is about double that for, say, tube-well irrigation. An analysis of effects of the major and minor irrigation on food production reveals that in terms of immediate effects, minor irrigation projects have yielded quicker results. This seems to suggest that wherever such alternative present themselves, it would be desirable to prefer minor irrigation works to major ones. This is especially helpful because since minor irrigation works could be dispersed widely, employment may be so designed as to meet local surplus labour resources.

[14] Mahalanobis, P. C.—Science and National Planning, *Sankhya*, Calcutta, September, 1958, p. 90.

[15] Clark, Colin—The Economics of Irrigation, *New Commonwealth*, 25th November and 9th December, 1954.

Again, the scope for substitution of labour for machinery is limited, not infrequently, for technical reasons. For example, in the construction of dams and canals, a certain degree of mechanisation is unavoidable in excavation work, for foundations, for tunnelling operations on rock, for blasting below water etc. Then when there is a time-element involved in the construction, because of say, monsoons, use of machinery may as well become inevitable. For example, a two yard excavator with about ten men can do a job in a day which the same number of men would take a month to do. If rigid time schedules for different stages of work are involved, there may be no alternative but to resort to machinery.

Variation in Labour-content of Projects

To what extent the labour-content of projects can be varied may be indicated with respect to certain works included in the First Plan.[16] On major irrigation works such as Malampuzha and Manimuthar, the labour costs formed 40 to 50 per cent of the entire costs of the projects. With the use of machinery on considerable scale, such as at Gangapur, the share of labour might be reduced by half. On purely canal enterprises, as in the case of Ghataprabha Left Bank Canal Project, particularly when the use of machinery was kept to a minimum the share of labour would rise to about 60 per cent of total cost. On a very large irrigation project like Hirakud, the share of labour fell to only 17 per cent, presumably on account of considerable use of heavy machinery. On power projects the share would be between 12 and 15 per cent. As land reclamation schemes employ tractors, the share of labour would be only about 10 per cent. All these projects could be broadly classed as large or medium in size.

Among the minor schemes, the share of labour would be quite high. On percolation tanks or small dams and canals, it seems reasonable to put the share of labour between 60 and 70 per cent. Extensive soil conservation schemes of the type which are being undertaken in Bombay would require labour costs to the extent of two-third of the total. The per acre cost of contour bunding works out to Rs. 60 of which Rs. 40 is accounted for the labour cost. Schemes of afforestation or new plantations have perhaps the largest labour component. In fact, in these schemes, except for the small amounts of seeds and plants and the cost of tools, hardly any other capital is needed. Hence the labour component would be more than 90 per cent of the total.

Analysis of costs of a few road-works, metalled and unmetalled, shows that labour component would be as high as 70 per cent. In schemes for concreting and asphalting the existing road surfaces, how-

[16] These data are from Professor Dandekar's book, cited earlier.

ever, the labour component would not be so high but forms about 30 per cent. On housing schemes the labour component would work out to 40 to 50 per cent.

These estimates of labour components of different schemes drive home one salient point. If all such schemes are conceived well in advance, it may be possible to avoid the use of machinery on a large scale and thereby increase the labour component substantially. As an official publication of the Government of India admits—"If jobs are started well in advance and time schedules are relaxed, where it is reasonably possible to do so, it should be possible to avoid the necessity of rush schedules on many jobs and thus bring them within the scope of manual labour."[17]

Even *within* a given investment pattern, which may have been evolved independently, therefore, it seems possible to give an employment bias to the plans, if only these points are borne in mind. A great deal of attention to individual projects and to the alternative technical possibilities open would undoubtedly have to be paid.

Much is being discussed about drawing 'voluntary' labour in projects which will improve local economic activity and standards of living. Carrying out of such works would depend largely on the organisational ability of the local leaders. From some of such projects carried out in India, it is found that although participation in these activities is entirely on a voluntary basis, the incentive to engage in them is much greater for substantial farmers than for rural labour without land, or with so little land that they are mainly dependent on work for others.[18] Take, for instance, the findings of a recent investigation conducted in areas where the community projects have been in operation

TABLE III

Labour Cont ibution

Category of farmers (size-group) of cultivated holding)	*Labour contribution (man-days per contributing household)*
Below 2 acres	4·5
2 to 5 acres	5·8
5 to 10 acres	5·9
10 to 25 acres	13·7
25 and above	18·3
All size-groups	7·1

[17] *Report of the Construction Plant and Machinery Committee*, Ministry of Irrigation and Power, Government of India, New Delhi, 1954.

[18] See : Uses of Agricultural Surpluses to finance economic development in under-developed countries, *F.A.O.*, Rome, 1955.

and where a specific attempt was made to elicit public participation in local works. The following data indicate the extent of labour contribution made by different categories of farmers, to local works like roads, school building and drinking water wells. They show that, broadly, the smaller the[19] farmer the lower the labour contribution, relatively. Labourers do not profit directly from such projects and hence this reluctance. While such schemes of making use of 'labour contributions' may be welcomed, from a general point of view, they are hardly relevant from the point of giving additional employment and income to the under privileged section of the rural society. Not paying any wages would amount to almost defeating the basic purpose of emphasising employment-creation in rural areas.

The priority that would be given to employment creation over other alternatives would ultimately seem to depend upon how large the local labour surpluses are or how worse is the employment situation; and to what extent is it possible to increase the employment-content of the 'normal' development projects, in the light of the technically possible alternative courses. If in a particular region, in spite of exploring such possibilities the employment situation is not likely to be improved, to the desired extent, then it would be essential to go in for certain projects with perhaps the sole object of creating additional employment. These issues are taken up for detailed discussion in the next and concluding section.

VII. Some Policy Implications

In this concluding Section an attempt is made to bring together the different strands of thought outlined so far with a view to underlining some policy implications.

Co-operative Farming

Although the institutional framework seems to offer a formidable obstacle for radical reorganisation of the agricultural sector for the purpose of eradication of disguised unemployment, there is another form of organisation which may facilitate this process, and that is co-operative farming. Pooling of land for joint cultivation, as visualised by the Nagpur Resolution, will no doubt avoid the institutional obstacles now present and thus facilitate the release of surplus labour of individual farmers who, under the existing conditions, are tied to their holdings and though underemployed, are not readily available for alternative employment. Further, it also opens up possibilities of undertaking development activities like soil erosion, levelling, bunding, layout of field channels etc.—all of which may have to contend against

[19] The fifth Evaluation Report on working of Community Development and N.E.S. Blocks, *Planning Commission*, Delhi, May 1958.

numerous obstacles under the existing situation. Co-operative farming thus enlarges the scope for productive employment *within* the agricultural sector itself. Thus while on the one hand it makes the disguised surplus labour explicit or available for alternative employment, on the other hand it opens up opportunities for development work in agriculture.

All this is based, of course, on the presumption that the co-operative farm would take up only an optimum quantum of labour force, so that those who work on it are all fully employed. Only, it would be converting the disguised unemployment into overt or open unemployment. Hence provision of gainful employment to the surplus so siphoned off becomes a pre-requisite to the pooling of land.

Apart from numerous other difficulties that such co-operative farms would be confronted with, there is the very first issue of who exactly will be entrusted with the implementation of this radical programme of establishing co-operative farms throughout the country. Obviously a programme like this cannot be implemented exclusively by the government departmental agencies. Even in respect of the much milder forms of co-operation like credit the record of the administrative machinery has in no way been encouraging. Hence the co-operative farming programme may require an emotionally surcharged atmosphere for its successful implementation. If, as it is postulated, the Village Panchayats are to play this crusial role, the colossal task of equipping them with the requisite technical and organisational know-how would need to be tackled. As it is, although the Panchayats cover more than about half of the total number of villages, only 15 per cent are reported to be working satisfactorily even in respect of their legitimate functions. Nor can the party in power claim to have in readiness such a well-trained cadre of political workers with the necessary ideological conviction and organisational discipline.

Need for Organization

The question of the key factor in economic development is one which could be discussed interminably. There are many things which can be done by a nation to develop itself. Improvements in the fertility of *land*, in the skill and efficiency or *labour* and in the supply of *capital* are the things of which development consists. But all these may be wasted if there is not the *organization* to make use of them and there are cases of planned development where this "factor" has proved the hardest to supply. In an admittedly narrower sense, for agricultural advancement at any rate, this organization may be said to be the key factor.

Concrete instances of how organisation, or rather the lack of it, has been responsible for the slow rate of progress in the agricultural

sector can be cited. In matters like the supply of improved seeds, spread of better farm practices, preservation of local manurial resources and provision of credit, it is not so much lack of finance as lack of efficient organisation that is hindering the progress.[20]

In this sense the "organizer" is a much more humble being than the Schumpeterian hero. Planning cannot be severed rigorously from administration, that is, the execution of or the organizational and institutional apparatus concerned with, policies or plans. A plan cannot operate in an organizational vacuum. Organization means initiating development activities and ensuring their operational efficiency. These qualities do not emerge merely by creating forms nor is public exhortation a substitute for well-thought-out operational efficiency. Success depends upon the enlivening spirit without which forms tend to be oppressive. The enlivening spirit comes from education and demonstration and above all from determined persons who set the pace. Such pace-setters are either men filled with missionary zeal or from an indoctrinated party cadre. It is also possible to conceive of co-operative disciplining within the democratic framework. Already the devoted band of Bhoodan workers or even the Bharat Sevak Samaj provide instances where such zeal has brought in success, though in its own sphere and in its own way. But neither of them nor the party cadres serve planned development ends. Hence success in agricultural development seems to lie not in any esoteric formula but in forging a new instrument for organizing people in rural areas for clearly defined development purposes. For effective implementation of agricultural planning an organizational base has to be built up to guide, help and support the usual administrative machinery which, by itelf, may not cope with the tasks called forth.

The discussion, in an earlier section, regarding the production potential in agriculture is sufficient to substantiate the truth of this argument. Given such an instrument, for instance, there is no reason why the use of farmyard manure cannot be increased, say, ten-fold within a year, or why green manuring should not become a general practice within 4 or 5 years or why improved seeds cannot be adopted universally within a short period. It is a common experience that it is not difficult to teach the peasants new methods or train them in new practices, once it is made clear that acceptance of the new method or practice brings substantial and prompt economic reward. The real bottleneck is not the lack of adequate responsiveness of the farmers to the new practices, but the scarcity of the "teachers" able to explain, persuade and implement the methods. The peasant's practicality and earthiness are emphasized even by sociologists.

[20] For details see—The Organisational Approach to the Third Five Year Plan—M. L. Dantwala, *A.I.C.C. Economic Review*, Delhi, March 1959; also the Fifth Evaluation Report—*Results of the Acceptance of Practices Enquiry.*

At present, lack of effective implementation of land reforms, the very slow progress made in the field of co-operative movement and even in extension work, are all explainable in terms of the absence of such an institutional base.

Reverting back to co-operative farming, this discussion is certainly not intended to suggest that it is a necessary and the most desirable mode of farming. On the contrary, so much stress is laid in contemporary[21] literature upon questions of agricultural re-organization that it may be well to sound a dissenting note. One gets the impression from much of the discussion that not much can be done to improve agricultural productivity without vast institutional changes. This does not seem to be so. The typical farm in Japan is still only between 2 to 3 acre in size and yet productivity is 2 or 3 times higher than that in India. There do not seem to be any compelling grounds for adopting co-operative farming as the *universal* pattern of farming in India. Apart from the fact that this would be a complete break from the past, the family farms, if assisted by a net-work of service co-operatives are capable of giving a performance comparble to any co-operative farm. Thinking in terms of these technical improvements, coupled with co-operative credit and marketing, is not merely more realistic but would also yield far better results than concentrating on structural reorganization. In spite of the avowed resolutions it would be optimistic to expect co-operative farming to become the predominant mode of farming even after a decade or so.

Peasant agriculture has a tendency to stagnate in the absence of such aid or services. More prosperous peasants, for instance, tend to invest in buying more land rather than in improving it. This is probably because most of the methods or techniques of improving land are either not known at all or not quite popular. But if once the direction is found and initiative is given, the peasants are quick to grasp it. This can be substantiated by the analysis of data relating to capital formation collected by the Rural Credit Survey. It was found that in particular districts substantial capital formation took place because of a trend deliberately set in motion or because of a movement started towards development activity. This might be development of wells and other irrigation sources or a general activity towards land reclamation. All these, once started, led to increasing capital formation in the particular direction, eventhough in other respects economic activity and capital formation remained low. In such areas where special activity was started, even owned resources were drawn to a considerable extent in these particular types of activity. This indicates how State aid, direction and participation can help the farmer in realizing the need

[21] For a detailed discussion see—The Basic Approach to Co-operative Farming, the *Indian Journal of Agricultural Economics*, Bombay, January-March, 1958.

for improvements and then in starting a movement towards intensive capital formation. To this may be added a more recent example of Rajasthan's programme of *Medbundi* or smaller bunds. This programme[22] implemented largely on the basis of self-help has brought about a minor agricultural revolution by bringing new areas under cultivation, increasing soil fertility through conservation of moisture and thus has raised productivity. The mass campaign, the first of its kind in India, engendered a desire among the farmers to understand the utility of the programme and also a willingness to translate it into practice.

Displacement of small Farmers

This has been somewhat of a digression. The point is that though from the point of attacking underemployment, co-operative farming affords a good arrangement, there are reasons to believe that its widespread adoption, in the present circumstances, cannot be regarded as an immediate possibility. The next question that we have, therefore, to consider is : If peasant proprietorship continues to predominate or if the promotion of it is to be taken as a long-term policy, what should be the approach to disguised unemployment ?

Reverting to our concept of the "standard holding," suppose the cultivators are divided into three broad categories :—

(i) those cultivating holdings slightly less than the standard unit ;

(ii) those cultivating about half the standard unit, and

(iii) those cultivating, say, about one-third or one-quarter of the unit.

We are, obviously, omitting the fully employed cultivators or those cultivating units equal to the standard unit and above.

In this situation, naturally, the policy would be to make available, as far as possible, additional land to cultivators under category (i) to the extent of making the size of their cultivated holding equal to the standard unit. Since the margin between the present holding and the standard unit is relatively small, such a course of action would be feasible. It might also be possible to increase the quantum of employment on the existing holding itself by introducing some improvements like irrigation, manure, etc. More of it later.

Cultivators under category (iii) stand at the other extreme. The holding in this case is so small that these cultivators may be said to be just "sticking" to it in the absence of any other alternative. It is

[22] For details see—*Agricultural Situation in India*, New Delhi, May 1959, p. 185.

in this context that these farmers may be regarded as being most suited for being removed from the land. A progressive siphoning off of this category should, therefore, be the explicit policy of planning. In practice labour is mobile only in so far as it is dependent on wage employment. One of the conditions of promoting rational movement out of agriculture is the creation of a landless class. Otherwise, mere wage incentives may not be powerful enough to induce such farmers to give up land to seek employment in distant places. An analysis of labour employed on seven major construction works revealed that more than half of them were either totally landless or very small cultivators cultivating less than one acre of land.[23] Moreover, this depriving them of their land will not make really much difference to their level of income ; because, as we have seen earlier, their possessing a small holding has in no way improved their economic status. The land thus collected from this category of farmers will be available for re-allocation to farmers of categories (i) or (ii).

Between these two ends of the problem rest the cultivators under category (ii). Here the problem is two-fold ; firstly, the interest of these cultivators in land is certainly substantial and hence they cannot be easily removed from land. On the other hand, there does not seem to be any immediate possibility of providing them with full employment on land itself. This is so because if they are to be given additional land, the area of land thus required is large, in fact as large as the present holding itself. For these cultivators the remedy would appear to lie, therefore, in the provision of complementary employment by way of some kind of household occupations etc.

Let there be no misunderstanding. These suggestions are mainly an effort to chalk out the broad lines of policy and are not intended to offer any blueprint for full employment. The basic idea underlying the whole approach is to siphon off surplus labour only to the extent to which it could be immediately employed elsewhere and to do it with minimum of social disintegration.

Overhead Capital

The next important question would, therefore, be: What is to be done with the surplus labour thus siphoned off ? It should also not be overlooked that besides the unemployment to the extent of about 3 months, of those who do find wage-employment, there is already a clear surplus of about 16 per cent of labourers who fail to get any employment at all.

Ordinarily, if by utilising their labour we mean merely finding *some* work, it should be no problem at all because there is so much

[23] See—V. M. Dandekar cited earlier.

to be done in rural areas. Promotion of what are now called "infra-structure" types of investments would seem to offer the best solution. Here we are particularly concerned with those types of low-yielding and slow-yielding projects which cannot be easily financed but which are nonetheless essential pre-requisites for speeding up economic development and for creating the basic conditions under which other projects can be made more effective. Such slow-yielding and low-yielding projects include investments necessary for transport, communications, power and various forms of basic agricultural development programmes—the economic overhead capital; and for promotion of health, education, housing—the human or the social overhead capital. It so happens that such "infra-structure" investments are likely to consist, at least many of them, of the kind of labour-intensive projects which we are seeking.

We have already noted that, *if* planned properly, construction of public works such as river dams, irrigation channels, roads, afforestation, etc., can typically make use of masses of unskilled labour with relatively little equipment.

It is rightly emphasized that while even steel and machinery can be imported from abroad, electric power, irrigation, inland transport services cannot be imported. The facilities for producing these services must exist within the country or they cannot be had at all. Investment in such essential public facilities is, therefore, absolutely unavoidable. By contrast, investment in steel and machine production is, in principle at least, postponable.

Practical Difficulties in Implementation

Thus, while on the one hand there is surplus labour and on the other a wide range of social overhead capital that could be built up, what prevents the planner from putting the two together? A number of practical difficulties seem to crop up. The discontinuous nature of employment on construction works, the difficulty of adopting them to the local labour surpluses and the extent to which they would displace investment in alternative projects—these are some difficulties that arise. Let us now consider these and allied issues.

By its very nature, employment on construction works is temporary. Hence if a group of labourers is to be kept continuously employed, it would be essential to have a chain of such works in succession to one another; and this in turn might necessitate movement of labour from place to place. Suppose a hundred persons are employed for one year on digging irrigation canals. When once the canals are complete, the labour force becomes available for some other project; or will relapse into unemployment in the absence of any. Hence this type of employment is sometimes appropriately

referred to as "revolving" employment on schemes of investment. The digging of the canal, however, has left a "sediment" of permanent employment in so far as it has enhanced the labour intensity of cultivation in areas irrigated; and to that extent, therefore, has provided permanent "fuller" employment to the cultivators concerned.

That surplus labour is not evenly spread throughout the country is an established fact. If the proportion of agricultural labour to total rural population is any indication of the surplus, it can be seen that the proportion is as large as 50 per cent in South India on the one hand, and as small as only 10 per cent in North-West India, on the other. The point is that surplus labour appears to be concentrated in certain areas, namely in Bihar, Orissa and perhaps in most of the States of Central and Southern India. On this basic fact is to be superimposed another important result of the analysis of the labour employed on development projects. Except in the case of very large projects where employment might continue for several years, the labour employed on most of the development projects is drawn from the surrounding region within a radius of about 50 miles from the project site. Thus in the absence of a promise of continued employment over a long period, and in the absence of adequate living accommodation, larger works fail to attract labour from farther distances. If the projects are to be designed with the explicit object of providing employment to the surplus labour there is thus the need to plan them on a detailed regional basis.

Larger works take time to be started. Then again, it is more often on such works and sometime on the medium sized works that use of heavy machinery is preferred to the employment of a large number of workers both from the stand-point of economy and administrative convenience.

Local Works

It, therefore, becomes obvious that if employment is to be provided for a large number of workers, in addition to the medium and large works, a number of *local* works must be started particularly in regions where under-employment has assumed serious proportions. But to emphasize the need for local works does not mean that these should be accorded high priority over other works. Investment merely for the sake of full employment seems pointless if other lines of investment yield higher returns. In fact, the ultimate economic benefits resulting from such local works may not appear sufficiently remunerative. And yet, this is probably the only way by which the much-needed employment and income could be provided in rural areas within the existing agrarian structure. Hence it would be more appropriate to view such works as some kind of "relief works" rather than as those which, by the usual economic criteria, would justify them-

selves, although they would undoubtedly yield certain economic benefits. If, in fact, in certain areas underemployment is extremely acute, one may have to give up the conventional criteria of cost accounting and substitute labour for machinery, although this may mean raising the total cost of the project.

What are the possible local works that could profitably be undertaken with the help mainly of labour and with small doses of capital? Both from operational expediency and from the nature of the purpose for which there are designed the projects now undertaken by the Community Development programme in India seem to offer a good example in this context. Projects undertaken include—the building and the improvement of the school house, village wells or tanks, village privies, gutters and paving of village streets to end dust and mud; a community centre for meetings, entertainment, etc., village access roads, irrigation dams or weirs, or diversion dams in small water courses to spread flood waters over the land to be absorbed, irrigation canals, waterways, or drainage ditches, soil conservation terraces or "bunds," and storage warehouses for supplies for farm distribution. To add two items of a more general nature, roads and improvement of rural housing may be mentioned. The absence of good roads in large tracts of rural areas of the country is reflected in the low all-India average of 0.22 mile of road per square mile. This, it has been pointed out, is less than the standard (0.30 mile of highway per square mile) for a "desert area" in the United States. As the data collected recently illustrate, the improvement of housing conditions in rural areas is a task of enormous dimensions. A large proportion of the 54 million houses in rural areas need to be rebuilt or substantially improved. More than 95 per cent of the houses have no latrines attached to them.

This list is exhaustive enough to indicate that such projects can be diffused all over the rural areas and also be so framed as to meet the local needs of surplus labour. Here also, one could make a distinction between the purely economic and the so-called social projects, although the dividing line between welfare and productive investments is not an easy one to draw. To cite an instance, a multi-phase medical survey conducted in selected villages in Mysore State revealed an alarmingly large number of villagers suffering from severe anaemia. In most of the cases it was due to worm infection,[24] which was caused by poor general sanitation. But even the privy designed by the Village Industries Board costs about Rs.15, a sum much beyond the resources of the average villager. In such cases, a relatively smaller investment in environmental and general sanitation would yield results that cannot be expected in any other lines of investment. So-

[24] Dr. Govinda Rao, privately communicated.

cial overhead capital also affects output; an improvement in the quality of the population and in the social environment eventually results in an increase in the capacity of individuals to produce. Expenditure on housing, health, sanitation improved diets and education, etc., has therefore, to be viewed in this broader perspective. In any region or locality what particular projects should be given priority should depend upon a detailed study of these general factors.

In many of these projects again, it is possible to make use of materials locally available. There are certain types of materials such as stones, sand, gravel, earth, etc., which may be available in such abundance in certain areas that their use for new construction works does not require diversion from other lines of production. But there are also materials which are scarce and have alternative uses within an investment programme such as timber, cement and steel. Thus to design a project for each locality may demand an imaginative extrapolation of local needs into local resources.

It is, therefore, clear that these works would need not only wage goods for additional consumption of labour employed but also raw materials. Naturally, resources, however small, will have to be found for such investment.

The organisation of such works on a country-wide basis might throw up its own problems. The relative advantages to the economy of the various projects would have to be studied by the central planner, both overall and with respect to their regional and local impacts. Development can be speeded up only if sound projects are worked out and if the administrative facilities for their implementation can be created.

This then demands sufficient leadership, administrative and otherwise, sufficiently dispersed and this is not likely to emerge spontaneously. Ultimately success of such local works would depend upon the perceptiveness of the leadership and its capacity to ferret out new employment opportunities.

Experience elsewhere seems to suggest that for planning in overall terms a central organisation may be helpful, whereas actual implementation of the projects may be entrusted to regional organisations and the Village Panchayats at the village level. The Central Organisation may also, in the light of the requirements of a region, scrutinise other projects included in the regular plan and suggest to what extent labour could, or needs to be, substituted for machinery on specific projects.

So far the projects that we have been considering are those which can be regarded as more suitable for landless labourers. We have yet to answer the question, what about the farmers of, say, the middle strata, who do not have sufficient employment and who, at the moment, could not be transferred to non-agricultural sector. Until such a transfer can come about through industrialization, one posssible line of employment policy is to explore the possibilities of fuller utilization of this labour force within the agricultural sector itself. We have already referred to this aspect, but some details might be useful. Notwithstanding the high labour intensity of agriculture, there still appears to be considerable scope for increasing productivity by devising new ways of utilizing their surplus labour. In some areas there might be scope for applying more labour to the land, as for instance, more ploughing or more weeding or additional work to eradicate insect pests. While in some areas deep ploughing may itself lead to higher production, in others introducing operations like transplanting or bunding may be advisable. The case of Rajasthan where small bunds have played an important part has already been alluded to. Extension of mixed farming which will not only augment the cash income of the farmers but also produce more manure may be feasible in certain other areas.

Two points need to be stressed here. In any region on what particular lines should such employment creation on land itself proceed would depend upon detailed study and investigation. In view of the wide variations in the soil, climate, farm practice resources etc., among different regions, there is no one formula for increasing employment on land ; nor could any general principles be laid down. Given a careful investigation, however, it should not be difficult to explore these possibilities. Secondly, the extent to which the approach could be made successful depends chiefly on the promotional activity of the government and partly on the organizational effort that could be thrown up at the village level. While each individual rural household left to itself is unlikely to do more than what it is accustomed to, given this promotion and the specific direction, a great many possibilities of utilizing surplus labour may actually spring up.

Compensation of Seasonal Unemployment

There is yet another simple way by which even these farmers could be provided with additional employment. It is in this context that the other aspect of underemployment, namely, seasonal unemployment becomes important. It seems helpful to make a distinction between two components of seasonal unemployment: (a) unemployment during the "off season," or what is more meaningfully described as "dead season," and (b) intermittent seasonal unemployment.[25] In

[25] For details reference is invited to—"Some Aspects of Underemployment" cited earlier.

contemplating agricultural production what strikes the inquirer is that during the year there is a dead season when there is practically nothing to do. With reference to any area or crop this season can be easily determined, for it is well marked out. That is why this period of idleness is more definite in occurrence, continuous and sustained, as contra-distinguished from the intermittent seasonal unemployment which is indefinite, sporadic and intermittent. Its being called the dead season is no misnomer, for the season is dead in more than one sense. Not only is there practically no work on farm, but the village economy in general also betrays signs of being in a state of "unemployment trance." Even for labourers employment is hardly available during this period. If some local construction works of the type mentioned earlier are timed in such a manner as to coincide with the dead season of the locality, they are likely to attract a large number of farmers also. This is so because only during this season the farmers are not "tied" to the land and are, therefore, genuinely free and able to take up such work. Not than even if the projects are so timed, *all* farmers would participate. All that is sought to be emphasized is that if they are complementary in time to and co-extensive with this dead season, they would ensure employment to those who really need it. It may be noted that such dead season may vary from a period of one month in a wet tract to about four months in a dry tract. Making use of seasonally idle labour in this way is relatively more simple and easy, because it does not at all involve any re-organization of the agrarian structure.

There is yet another reason why it is desirable to start construction works during this particular season. It is well-known that wages in the rural areas are subject to large seasonal variations. For instance, a broad idea of the dispersion of men's wages can be had from the fact that as against an average wage of As. 17.5, the standard deviation was about 7.5. The co-efficient of variation was thus about 43 per cent. The wage rates seem to touch the lowest ebb during this time. That is why, during a pilot investigation, some workers, during this season, simply said, "If you feed us, we will work." This only shows that they are desperately in need of some employment, however low the wage rates offered may be. Hence by offering relatively lower wages, it is possible to bring down the wage bill of these local projects, if only they could be adjusted to this season.

Lastly, it is necessary to revert to an earlier point, namely, voluntary contribution of labour by the people. One of the aims of the National Extension Service has been to organise the systematic use of manpower resources for works of benefit to the community as a whole. Wherever a correct approach has been made on behalf of the administration the people have come forward readily to contribute both labour (*shramadan*) and other resources. The value of the con-

tribution made by the people in the national extension and community project area, during the First Plan, amounts to about 56 per cent of the expenditure incurred by the Government. In enlisting the participation of the people, use has been made of local organizations like, panchayats and co-operative societies. Although the order of magnitude of the contribution may not be spectacular, it nevertheless indicates the direction in which such efforts for mobilization of labour resources should proceed. Even in the matter of creation of communal assets, therefore, much seems to depend upon the ability of the administration or the party in power, to build up strong basic institutions in villages, to strengthen their resources and to provide them with continuous guidance, opportunity and help. The extent to which an "*elan*" can be created amongst the people, by these ways, would ultimately determine the pace with which the programme of building up communal assets would proceed. In such an effort of mobilizing voluntary labour, workers who would not otherwise participate in it may be employed on wages.

The peculiar socio-economic complex of a region might not facilitate full utilization of idle labour, through such local construction works alone. For instance, women and children, and even men of the so-called higher strata might refrain from participating in these even though, on purely economic grounds, they might need employment most urgently. In such cases also a way could be found out. There are more avenues of productive employment than the central planner—and, shall we add the theorist ?—usually thinks of. True, they are scattered and singly, by themselves small ; yet cumulatively they make a significant sector of employment. *Bidi* making, *patravali* making, lime burning, collection of neem seeds, are instances in point. These and similar others do not need much capital investment ; their main weakness is probably faulty and inefficient organisation. If co-operative organizations could be created these could be improved. At present when the city dweller thinks of non-farm employment his mind works in a very limited orbit. A better acquaintance with rural life alone can widen the possibilities of utilising more fully idle hours and idle resources of the countryside.

To conclude, if any general theme runs through the whole approach to agricultural planning, it is organization. This "factor" is often neglected and sometimes treated as not a purely economic issue. It is hoped that this discussion would drive home the important part it can play in development planning.

Bombay N. A. MUJUMDAR

APPENDIX

TABLE IV—Quantity of Cereals Consumed

(in ounces) per day per consumption unit

Regions/and selected states	*Quantity consumed per consumption unit in the levels of living*				
	Rs. 51-100	Rs. 101-150	Rs. 151-200	Rs. 201-250	Rs. *All levels*
North India	14·2	19·0	23·4	29·6	23·3
Uttar Pradesh ...	14·2	19·0	23·4	29·6	23·3
East India	15·7	19·0	20·5	23·0	20·0
Bihar	13·5	16·9	20·2	23·8	19·5
Assam	10·0	15·1	24·2	25·7	22·8
Orrissa	17·5	25·0	32·4	41·2	20·7
South India	11·8	16·3	21·7	23·0	15·5
Madras	11·9	16·6	23·4	24·9	15·9
Mysore	13·4	17·7	22·2	24·9	17·8
West India	13·2	17·8	21·3	26·1	16.2
Bombay	13·4	18·0	22·0	17·7	15·9
Central India	16·1	18·9	23·6	25·7	18·8
Madhya Pradesh ...	16·9	19·8	23·8	26·7	19·5
Hyderabad	13·3	16·9	21·2	22·7	16·8
North-West India	15·2	21·1	23·7	26·4	24·1
Rajasthan	16·8	24·1	27·6	32·7	27·7
Punjab	13·8	21·6	21·6	26·0	22.0
All India	13·7	18·0	21·9	24·6	18·4

Source: Agricultural Labour Enquiry, Report on Intensive Survey of Agricultural Labour, Vol. I, All-India, p. 134.

PROF. SHENOY ON THE INDIAN ECONOMY

I

THE Second Five Year Plan of India was ushered in an atmosphere of acute controversy. At the time that the Second Plan was being formulated, Professor Shenoy submitted a minute of dissent to the Memorandum of the Panel of Economists. In this he argued that the outlay of the Second Five Year Plan was beyond the capacity of the economy. He strongly objected to the utilisation of deficit financing as a method of resource mobilisation. The experience of the working of the Second Five Year Plan over the past four years has not dimmed Professor Shenoy's enthusiasm for his cause. The facts that commodity and gold prices have risen steeply since the commencement of the Second Five Year Plan and that there has been an acute balance of payments crisis have strengthened his conviction about the validity of the criticisms. Recently, Professor Shenoy has been strongly protesting against the harmful effects of large-scale foreign assistance to India. He has been holding that the foreign aid that India has received so far has been grossly misused and has increased the extent of hoarding and smuggling. The object of the present Paper is to subject Professor Shenoy's views to a detailed examination in the light of available statistics and of plausible economic reasoning in the context of the economic situation in India today.[1]

II

From the point of view of controversies, which it generated, the First Plan was a relatively tame affair. Since the time the Second Plan was conceived, there has been no end of controversy about its size, the methods of resource mobilisation contemplated, the monetary and fiscal implications of the methods and the impact of the Plan upon India's international transactions and the implications of the investment structure to its output and employment targets. At the time of the formulation of the Second Plan, there were broadly three viewpoints: the first viewpoint, representing the opinions of the Planning Commission, a major portion of the economists who advised the planners, and, by and large, the members of the prominent political parties, was in broad agreement with the size as well as the strategy of development contemplated in the Second Plan. This group believed

[1] Professor Shenoy has presented his views in a number of publications, *viz.* (1) 'Papers relating to the Formulation of the Second Plan.'—Planning Commission, Government of India; (2) Problems of Indian Economic Development, University of Madras, 1958; and aiticles in 1959 Annuals of *Capital* and *Commerce*, as also in some of the leading English dailies in India.

that the time had arrived when the investment emphasis on Agriculture could safely be minimised, that the Second Plan should initiate a major investment shift towards industries in general and heavy industries in particular, that the economy as a whole was capable of procuring the domestic resources to match the investment effort that was contemplated, that the large measure of deficit financing contained in the Plan could be worked through in an atmosphere of fairly stable prices, and that the balance of payments gap on the current account arising on account of the direct effects of the accelerated investment outlays could be reasonably met through a reduction in sterling balances and moderate amounts of foreign aid whereas the indirect effects could be checked by strict import controls. Those who were slightly skeptical about the effects of deficit financing upon the price level argued that if adequate economic controls could be devised (including State Trading, if necessary), prices would be held stable.

The second viewpoint, largely represented by Professor Shenoy, maintained that the size of the Plan was beyond the capacity of the economy. The Plan, according to this school, could be fulfilled only at the cost of a tremendous extent of forced savings reflected in the steep rise in prices that would take place as a result of the investment efforts. This school tended to favour relatively greater scope for the working of the private sector and believed that if the Plan was sought to be forcibly pushed through, there would tend to be a serious adverse effect upon the external value of the rupee. However, this school did not suggest any major shift in investment pattern; nor did it envisage any close relationship between the investment pattern and the long-period rate of growth of investment and income. This school was not committed to the thesis emphasising a rapid rate of expansion of food supplies in the economy.

The third school represented by a minority of economists argued that the overall size of the investment effort of the Plan was itself determined by the rate of growth of food supplies, that the Second Plan under-emphasised the crucial importance of the wage-goods gap in the context of programmes of economic development and that, hence, the income and employment targets of the Second Plan would not be fulfilled to the desired extent. In view of the meagre provision for investment effort in agriculture and the relatively slow rate of growth of food production that was planned, there would tend to be a steep rise in the level of prices. The major impact of the additional money incomes generated by investment efforts would be upon food supplies; the level of prices of food would tend to determine the cost of living, and, hence, the level of money wages in the organised sector in the economy. This school criticised the strategy of development contemplated in the Second Plan on the ground that a different strategy would lead to better results with the same quantum of resources.

They emphasised how the mobilisation aspect of the plan programmes would get into difficulties; but, whereas Professor Shenoy believed in terms of an *absolute* reduction in the scale of investment effort, the above school differed from him radically in this respect. It may be pointed out the Professor Shenoy was not the first nor the sole economist who pointed out the possibility of the upward push in the level of prices.[2]

What has been the actual experience of the working of the Second Plan so far? There is no doubt at all that the expectations of the first school have been wholly belied. In view of the difficulties of resource mobilisation, the size of the Plan had to be curtailed from Rs. 4,800 crores to Rs. 4,600 crores. In terms of constant prices, the actual outlay has fallen short of the targeted amount by about 20 per cent. The investment outlays would broadly be in correspondence with the target amounts; in terms of constant prices, however, there would be a shortfall of about 15 per cent. There will be a shortfall in the attainment of a number of physical targets, broadly of the order of about 20 per cent. Food production might barely attain the targeted level of 75 million tons. The completion of a number of production plants in respect of electricity, coal, steel, etc., has been slightly delayed. The working of the Plan itself led to a severe balance of payments crisis. As against the planned gap of Rs. 1,120 crores, the actual gap was roughly about double the above amount. Whereas it was planned to utilise Rs. 200 crores of sterling balances, the actual utilisation has been about three times the above amount. As against the expected quantum of foreign aid of Rs. 800 crores, the actual foreign aid has been of the order of nearly 1,550 crores, including PL 480 assistance of Rs. 430 crores. As against the planned imports of food of about Rs. 230 crores, the actual imports have been about Rs. 720 crores. Again, in terms of the employment impact of the Plans, it is now expected that only about 5-6 million jobs would have been additionally provided as compared to the target of about 9 million jobs. In respect of domestic resource mobilisation, the performance has been very disappointing. Despite a very heavy step-up in taxation, as against the expected amount of Rs. 1,200 crores on the revenue account, only Rs. 800 crores would be available. Market borrowings would exceed the target by about Rs. 100 crores; but this has been largely due to the purchase of government securities by the State Bank out of the counterpart funds in lieu of PL 480 sales (the amount of investment on this score has totalled Rs. 300 crores). The Reserve Bank too has helped Government borrowings to the extent of Rs. 80 crores. Thus, in effect, actual market borrowings have been only 60 per cent of the targeted amount. The shortfall in respect of small savings has been equally glaring. As against an expected amount of

[2] *Vide Papers relating to the Formulation of the Second Plan;* **also** *Planning for an Expanding Economy* **by C. N. Vakil and P. R. Brahmanand.**

Rs. 500 crores, only Rs. 350 crores was made available on this score. The target of deficit financing however has been fulfilled ; the actual amount in this respect might amount to Rs. 1,220 crores or Rs. 1,300 crores if we include the Reserve Bank's support to the Government's borrowing programme ! Foreign assistance has been roughly double the amount that was planned for. The situation in respect of the price level has been causing a good deal of concern. Since the commencement of the Seond Plan, prices have gone up by nearly 20 per cent. The cost of living too has also gone up steeply. This has led to a number of upward revisions in money wages and emoluments in both the private and the public sectors. It is too early to envisage the full effects of the Second Pay Commission's recommendations upon the structure of the Central and the State budgets. The wage situation is yet fluid, the new equilibrium not having been reached.

The above upward effect upon the price level has operated despite the gross availability of food supply increasing at the initially planned rate, i.e. at about 3 per cent per annum. (This proves decisively that the viewpoints of the third school was nearer the truth than the viewpoints of either the first or the second school). In respect of the target of income growth, it is believed that national income at the end of the Second Plan might go up by about 18 to 20 per cent. This indicates shortfall of the order of nearly 25 per cent as compared to the targeted rates. One must however note that even the 20 per cent increase in income would contain within itself the beneficial impact of a large quantum of import surplus which has been a dominant factor in the Second Plan. There is no doubt that the actual working of the economy has belied the theory or experience underlying the development strategy of the Second Plan. This, however, does not prove that the viewpoints of Professor Shenoy and his supporters have been borne out. That prices have risen, that there are shortfalls in physical and income targets, that there has been an acute balance of payments crisis, all this is true. But there could have been a way out, provided more food was produced at home or poured into the economy. The fault lay with the pattern of planning efforts, with the stuff and substance of the Plan, rather than with the *size* of the Plan. The relative failure of the Second Plan has however given an ample opportunity for Professor Shenoy to embark on a mission of criticism against the idea and content of economic planning itself. It is, therefore, necessary to examine the viewpoints of Professor Shenoy in great detail.

III

The various points made by Professor Shenoy in connection with the economic situation in India may be summarised as follows :

(1) Growth of investment since the Second Plan has not been matched by growth of voluntary savings ;

(2) Deficit financing and credit expansion have filled the gap between investment and voluntary savings ;

(3) The major effect of the process of expansion of investment, unmatched by voluntary savings has been on the level of prices ;

(4) Rising prices imply a serious loss of confidence in the value of the rupee and have increased the premium placed upon gold ;

(5) The large foreign aid that we have been receiving has been wasted in : (a) purchases of gold, (b) purchases of assets of foreigners, (c) increased domestic hoarding of foodgrains, (d) purchases of smuggled imports of luxury articles ;

(6) But for the inflow of large foreign aid, which India has been receiving in large amounts, the Indian Government would have pursued *moderate* and non-inflationary rates of investment ;

(7) The U.S. PL 480 Loans have been utilised by the Government as a cover for extra deficit financing ;

(8) Under current conditions, lessser foreign aid to India would induce the Government to husband its resources more carefully and to introduce disinflationary policies.

On various occasions, Professor Shenoy has been making out a case for a lower rate of investment as well as Plan outlay. He has also been very critical of the impact of the large-scale foreign aid that India has been receiving as, according to him, large foreign aid would encourage waste of resources because of Government's fiscal and monetary policies. He has been very skeptical of the beneficial effects of PL 480 assistance. Moreover, Professor Shenoy has been holding the view that the public sector has been encroaching upon the private sector and that the large foreign aid is being utilised by the Government of India to increase the control of the State upon the economy. Professor Shenoy has also been very critical of the 5 million ton buffer stock plan for food. On some occasions, he has held the view that imports of food would imply lower prices to farmers and curb the incentive for further production. On other occasions, he has held that the import of grains on PL 480 has either not helped the downward adjustment of prices or it has induced more hoarding.

IV

According to Professor Shenoy, the economy must not have experienced any substantial and sustained change in the rates of real capital formation. Available evidence as given in the following table proves conclusively that this is not true.

TABLE 1

Net Capital Formation in India, 1951-59

(Current Prices) (*Rs. crores*)

	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59
A. Total Net Capital Formation	665	480	589	899	1,003	1,315	1,568	1,443
1. Fixed Assets	485	542	645	812	962	1,095	1,376	1,428
2. Inventories	180	—62	—56	87	41	220	192	15
B. Public Sector	163	142	205	438	431	511	767	866
1. Fixed Assets	148	159	225	373	456	488	687	841
2. Inventories	15	—17	—21	65	—25	23	80	25
C. Private Sector ...	502	338	384	461	572	804	801	577
1. Fixed Assets	337	383	419	439	506	607	689	587
2. Inventories (excld. Agriculture) ...	165	—45	—35	22	66	197	112	—10
D. National Income	9,970	9,820	10,480	9,610	9,980	11,310	11,360	12,620
E. A as percentage of D ...	6·6	4·9	5·6	9·4	10·1	11·6	13·7	11·5
F. Investment Index based on consumption of steel and cement (1950-51=100) ...	112	121	129	152	176	228	236	222

The above table indicates that net capital formation rose from 6.6 per cent of national income in 1951-52 to about 11.5 per cent in 1958-59. The ratio of net capital formation to national income has nearly doubled over this period. This rise occurred as a result of expansion in the public and the private sectors. Investment in fixed assets in the public sector grew from about Rs. 160 crores in the beginning of the First Plan to about Rs. 860 crores in 1958-59, indicating roughly a five-fold increase; investments in fixed assets in the private sector increased from about Rs. 400-500 crores to about Rs. 600-800 crores, i.e. it has nearly doubled. To the extent that the ratio of investment in national income has risen—as it certainly has—there is bound to be a higher rate of growth of income than would have been the case otherwise. For example, for over 50 years, prior to the First Plan, national income had grown at less than 1 per cent per annum. Since the commencement of the First Plan, it has started rising at a rate between 3-5 per cent. Under current conditions, schemes of economic development in India have lifted the floor rate of growth of national income (assuming reasonably satisfactory monsoons).

There is no doubt that in a number of directions, the rate of growth of production has been stepped up considerably above the rates prevalent prior to the Plan and even in the initial years of the Plans. One cannot overlook the critical importance of planning efforts as well as the structure of outlays that has been responsible for the above acceleration.

V

Professor Shenoy's contention is that the growth of investment expenditure has not been counter-balanced by the growth of voluntary savings. The following table gives an idea of the sources of finance for the investment outlays.

TABLE 2

Sources of Finance for Net Capital Formation, 1951-52 to 1958-59

(*Rs. crores*)

	1951	1952	1953	1954	1955	1956	1957	1958
A. Total Resources	695	471	621	1,029	987	1,327	1,371	1,492
B. Domestic Savings ...	421	413	602	963	922	1,059	903	1,034
1. Personal ...	327	454	590	753	816	913	875	921
2. Corporate ...	39	13	—	16	54	55	20	24
3. Government	55	—54	12	194	52	91	8	89
C. U.S. P.L. 480 Funds ...	—	—	—	—	—	—	98	71
D. External Capital	94	75	48	48	75	53	110	340
1. Government	65	46	19	16	43	38	95	325
2. Private ...	29	29	29	32	32	15	15	15
E. Changes in Foreign Exchange Reserves ...	—180	17	29	—18	10	—215	—260	—47
F. Domestic Savings as per cent of National Income	4·3	4·2	5·7	10·0	9·1	9·4	8·1	8·2
G. Total Net Investment ...	665	480	589	899	1,003	1,315	1,568	1,443
H. Discrepancy between A & G	+30	—9	+32	+130	—16	+10	—191	+49

It may be noted that the ratio of domestic savings to national income has gone up from about 4 per cent in the beginning of the First Plan to about 8 per cent in 1958-59. No doubt, during the Second Plan, external capital has become more important than in the First

Plan. Over the eight-year period, external capital has contributed to about 12 per cent of the total resources and domestic savings to about 80 per cent. The slackening in the rate of growth of food supplies *vis-a-vis* rising investment expenditures has been the chief cause of the relative rigidity of the savings ratio in the Second Plan.

The term 'voluntary savings' is incapable of precise definition. Professor Shenoy's views on the feasible rates of monetary expansion, given conditions of growth in the economy, are far too much out of date with the current thinking in regard to monetary policy and development. For example, Professor Shenoy would argue that the rate of increase in money supply should be governed by the rate at which national income has increased, after making a 'small' adjustment for the growing degree of monetisation. Other conditions equal, a sizeable increase in the rate of growth of food supply would mean a more than proportionate increase in the rate of availability of marketable surplus. This can be illustrated by a simple example. Suppose in a given year 50 million tons of grains are produced. The equilibrium requirements of self-consumption by the farmers and for payments of wages to agricultural labourers might, let us say, amount to 40 million tons. Thus, 10 million tons would be available as marketable surplus. Suppose, next year, there is an increase in production by 10 million tons. The increase in self-consumption would be only marginal. The demand of the unemployed or disguisedly unemployed labour is not a material fact because their demand any way is not effective demand. Hence, assuming that self-consumption requirements increased, let us say, by about 5 per cent, the surplus available on the market would increase to 15 million tons. Thus, a 20 per cent expansion in food output would imply a 50 per cent expansion in marketable surplus. If the monetary authorities remain passive, the level of prices would crash ; farm money incomes would slump and the rural producers' demand for fertilisers, manures, etc. would be affected ; and, in succeeding years, in all possibility, their enthusiasm for higher production through more own investments would be damped. Hence, the monetary authorities will have to increase money supply not by the same extent as the money value of the increase in food production, but by a larger extent. If there is excess capacity in the rest of the economy, part of the increased money incomes of the farmers would be reflected in additional demand for non-food products ; hence, the general level of incomes in the non-agricultural sector would go up. Under these conditions, expansion in investment of a certain order is a necessary condition of a fuller utilisation of resources. A crude version of the quantity theory by which Professor Shenoy swears hardly holds true under these conditions unless, of course, the economy has such automatic flexible arrangements that money wages and interest rates start falling. The non-realisation of the multiplier potentiality of the increased food availability was the chief failure of the First Plan. Governed as he was by cannons of ortho-

dox finance, Shri C. D. Deshmukh, the then Finance Minister, was too conservative at a time when he ought to have been bold (though he became very bold in 1955-56 when he should have been very conservative !). There is another corollary that in years in which food production levels have fallen by a large extent, the marketable surplus would fall more than proportionately, and hence what is required is a fairly big contraction in money supply. This is what should have happened in 1957-58. But Professor Shenoy, perhaps, might favour a very conservative monetary policy for that year; but he would do so for any year for, to accept the latter would also imply that one must also accept the former. One way by which the Government of India has tried to offset domestic shortfalls in absolute as well as relative growth of food production has been through imports.

The availability of PL 480 wheat shifts to the right the supply curve of commodities and other conditions being equal, any shift to the right in the supply curve of a commodity is a factor making for a fall in prices, except under special conditions where an increase in supply has such an acceleration effect upon demand, and by a more than proportionate extent. This, however, is a perverse case in which, of course, Professor Shenoy—nor ourselves—is interested !

Nor can one hold the view that under Indian economic conditions, the general price level will move in the same direction and by the same proportion as changes in money supply. The following table clearly shows that the conclusions of the Quantity Theory of Money hold only under very restrictive assumptions:

TABLE 8

Money Supply and the Price Level, 1952-58

	1952	1953	1954	1955	1956	1957	1958
A. Annual per cent change in Money Supply	−2·2	1·7	6·7	13·7	5·9	3·8	4·6
B. Annual per cent change in Real Income	4·0	6·0	2·0	2·0	5·0	−1·0	6·8
C. Annual per cent change in Price Level	−17·7	4·4	−6·6	−5·2	13·9	3·4	4·3
D. Income velocity of Money ...	5·6	5·8	5·0	4·6	4·9	4·8	5·1
E. Index of Changes in D (1951 = 100)	102	105	91	84	89	87	93
F. Index of Changes in velocity of Bank Money (1951=100) ...	102	105	112	118	120	116	130
G. Index of estimated changes in the velocity of currency (1951 =100)	102	105	180	67	73	72	74

It may be noted that changes in money supply imply (a) sometimes a more than proportionate and (b) sometimes a less than proportionate change in the price level. Sometimes, the price level moves in a direction opposite of the changes in money supply. It is also true that sometimes the quantity theory holds by an almost complete extent. As the table indicates, income velocity of money does change, and by a great extent in the short period. In fact, the income velocity of money fell in 1954, 1955 and 1957. It has not as yet reached the figure obtained during 1952 and 1953. A fall in income velocity is certainly no sign of a domestic decline in the confidence of the rupee! We have tried to work out the estimated changes in the velocity of currency which forms nearly two-thirds of the money supply. This is done on the assumption that the proportion of transactions financed by bank money and currency has remained unchanged. (Actually, the proportion of currency in money supply has remained unchanged all these eight years). Figures of velocity of bank money are available in the Reserve Bank of India publications. It may be noticed that the velocity of currency has actually declined and by a wide margin, as compared to the initial years of the First Plan. (No doubt this is a welcome sign from the point of the monetary authorities ; but it might be a serious potentially inflationary factor in the years to come). Anyway, this proves that the actual facts are the opposite of what Professor Shenoy contends. An increase in the liquidity preference for currency is certainly not a sign of loss of faith in currency !

VI

Let us now examine Professor Shenoy's comments upon the effects of PL 480 assistance. At various stages, he has been either wholly denying the downward effect of such assistance upon the domestic price level or arguing that this assistance has, in effect, tended to strengthen the inflationary forces. He also maintains that PL 480 assistance has induced increased domestic hoarding of commodities. Before we examine Professor Shenoy's arguments in detail, it is necesssary to have a brief idea of the significance of PL 480 assistance. Under Title 1 of the U.S. Government Agricultural Trade Development Assistance, 1954 (commonly known as Public Law 480), the United States Government have so far executed four agreements with the Government of India for the supply of U.S. surplus agricultural commodities against payment of rupees. The rupee equivalent of the dollar cost of these commodities plus 50 per cent ocean freight costs is deposited in the U.S. Government Title Account in India (to the credit of the account of the U.S. Technical Mission in the State Bank of India). The total value of the commodities to be imported under the three agreements executed so far is about 908 million dollars or Rs. 441 crores. The first PL 480 Agreement was signed in August, 1956. The total amount involved in this Agreement was equivalent to Rs. 169

crores. This comprised of imports of 3.7 million metric tons of wheat, about 2 lakh metric tons of rice, about 2.5. million bales of cotton, and some quantities of tobacco and milk powder. In a supplementary Agreement in the month of June 1958, about 6 lakh metric tons of wheat and 1 lakh metric tons of corn and sorghum respectively were to be imported. The rupee counterpart of this assistance equalled Rs. 26 crores. The second Agreement took place in September, 1958. This comprised imports of 3.4 million metric tons of wheat and about 80,000 metric tons of corn. The rupee counterpart of this assistance was Rs. 124 crores. The third Agreement took place in November, 1959 and involved approximately an import of about 2.8 million tons of wheat and some quantities of maize, cotton and tobacco. The rupee counterpart amounted to Rs. 123 crores. Out of the total amount of about Rs. 441 crores, provision was made for an outlay of Rs. 71 crores for the use of United States Embassy. Loans for a number of projects for economic development amounted to Rs. 234 crores ; grants for economic development amounted to Rs. 93 crores ; and a balance of Rs. 44 crores was to be made available in the form of mutually agreeable loans to the U.S. and Indian firms. All told, a total quantity of about 9.6 million metric tons of wheat accrued as imports under the Agreement. Between 1956 and 1959, we imported about 12 million tons of foodgrains. About 80 per cent of this appears to have been through PL 480 assistance.

Let us now examine the trends in the prices of rice, wheat, cereals as a group, pulses and food articles between the period May 1955 and January 1960. We give below the index of prices in the above commodities or commodity groups for a number of months during this period (1952-53 = 100) :

TABLE 4

P.L. 480 and Food Prices, 1955-60

(Index 1952-53 = 100)

	Wheat	Rice	Cereals	Pulses	Food articles
May 1955	58	74	67	48	82
March 1956	85	86	87	77	93
	Aug. 1956—First P.L. 480 Agreement				
December 1956	94	94	97	87	105
May 1957	90	106	103	84	101
August 1957	89	111	106	87	112
December 1957	86	102	98	80	104
March 1958	84	100	95	78	102
	Sept. 1958—Second P.L. 480 Agreement				
December 1958	114	98	105	111	113
October 1959	109	112	110	94	124
	Nov. 1959—Third P.L. 480 Agreement				
Dec. 1959	96	101	101	92	118
Jan. 1960	97	102	102	92	118

It may be noted that prices of rice and wheat had already risen by nearly 12 per cent and 65 per cent between the period May 1955 and December 1956. Between December 1956 and January 1960, rice and wheat prices rose only by 9 per cent and 3 per cent respectively. In other words, a major portion of the increase in the prices of rice and wheat had occurred *before* the Second Five Year Plan commenced. This was partly a correction of the steep fall in prices that took place due to the harvest boom in the middle of the First Plan. Another point to be noted is that the rise in prices, particularly in the case of wheat, had occurred before the assistance in the form of PL 480 started flowing into the economy. From the above figures, one can easily trace the effect of PL 480 assistance upon the course of the price level of wheat. Wheat assistance in the first agreement started having an effect from the end of 1956. The index of wheat prices fell from 94 in Deecember 1956 to about 84 in March 1958. However, there was a big spurt in the price of wheat between March 1958 and December 1958. Wheat prices rose as much as 30 per cent in this period. The reason for this rise is none other than the very severe drop in wheat production in 1957-58, affecting supplies very adversely during 1958-59. For example, wheat production in 1955-56 was about 8.6 millon tons. In 1956-57, it rose to 9.3 millon tons. In 1957-58, the production fell to 7.7 millon tons, i.e. a drop of about 17 per cent. Obviously, this was the cue for the Government of India to enter into further agreements with the U.S. Government for additional wheat assistance. The second major agreement took place in September, 1958. As soon as the wheat imports started flowing into the economy, prices started falling. This process was helped further by the record production of wheat in 1958-59 amounting to 9.7 million tons. The index of wheat prices dropped from 114 in December 1958 to 97 in January, 1960. On the basis of the above figures, one cannot escape the conclusion that domestic shortfalls in production in relation to rising real demand have been largely responsible for the steep jump in wheat prices. The flow of PL 480 assistance visibly succeeded in bringing about a sharp downward effect upon wheat prices.

The impact of the change in the supply position is reflected in the price movements of other commodities too. The persistent upward trend in the price of rice has to be explained on account of the deficiency of PL 480 assistance in this respect. Anyway, what is most interesting is the fact that a good portion of the rise in cereal prices had occurred *prior* to the commencement of the Second Five Year Plan, and that imports largely through PL 480 have performed the traditional function which they are expected to perform in all countries and under all circumstances.

One must, however, remember here that there are basic factors which are making for a steady upward trend in the real demand for

foodgrains. The rate of growth of population during the First Plan was 1.6 per annum and is put at 2 per cent per annum during the Second Plan. A major portion of the demand for additional foodgrains, arising on account of population increase, has necessarily to be met. Even under conditions in which money incomes are constant, there will be some deflation in the prices of non-food commodities as income-earners utilise part of their incomes as well as liquid balances for the purchases of food in order to meet the commitments arising on account of the maintenance of a larger number of dependents. The relative prices of foodgrains would have a powerful tendency to rise under these conditions unless supply conditions change. The impact of rising population among rural producers is reflected in the form of a reduction in the market period in the quantity of marketable surplus. Unless additional food is forthcoming from other areas, the economy may be forced to reduce the quantum of employment in industry and allied sectors. Adjustments in the short and long periods are brought about through some rise in supplies, under conditions of diminishing returns. Another basic factor that is of importance in the current Indian situation is the effect of increased real incomes of farm producers. Nobody can deny that the Indian farmers were formerly consuming less quantities of foodgrains than they would normally have done under conditions of buoyant production. Improved productivity in agriculture reflected in the form of improved real and/or money incomes has certainly led to a higher level of own-consumption by the farmers. There is also an improvement in their liquid position. This would be reflected in the form of a desire to hold a higher proportion of grain stocks. All these trends would, by themselves, be desirable factors in the framework of growth of an economy. What Professor Shenoy and a number of other economists forget is that even under conditions of constant money incomes, an increase in population is bound to cause a rise in the money price of foodgrains. Of course, there is very little that can be done under current conditions to squeeze out more of surplus from the farmers. (Professor Shenoy, and his supporters, would hardly welcome—perhaps rightly so—squeeze measures on the farmers). Hence, the Government is forced to supplement domestic production by imported supplies. There is also the additional factor arising on account of the growth in employment, however meagre is might be in relation to absolute requirements. There is also the impact of the increasing degree of urbanisation. The impact of additional employment is in the form of expenditure on foodgrains. Hence the growing pressure on food supplies reflects basically healthy developments in the economy in the form of higher levels of employment, investment, 'real' liquid position, improved farm incomes improved productivity amongst industrial workers as a result of better

and more food consumption, and so on. No doubt more could be achieved under the current conditions if more food could be produced and procured. This, however, is a different issue. What cannot be doubted is the favourable impact of grain assistance upon general economic development and food prices in particular. To the extent that the plans of the economy contribute towards a rise in the rate of growth of food production and supplies, they enable the creation of improved economic conditions all-round. Hence, the wheat assistance is not inferior to other forms of assistance. The fact that imports are in the form of consumer necessities does not distinguish them in any way from the other commodities, may be even capital goods or steel.

Professor Shenoy draws attention to the increased hoardings of foodgrains as having counterbalanced, and, hence, caused by the U.S. PL 480 assistance. It is obvious that under conditions in which the level of food output has been rising, there would be an increased demand for inventories. During a year in which crops have badly failed, as in 1957-58, there is bound to be some increase in hoarding. This type of hoarding would have assumed larger proportions if the domestic supplies of food had not been larger and the price level higher than whatever it was. The use of PL 480 assistance as well as the prospect of such assistance in future is a strong factor working against such a hoarding tendency. One might in this connection therefore be very much surprised at Professor Shenoy's views in regard to the proposed buffer stock plan for foodgrains. His arguments here are, somewhat, inconsistent. He holds that (a) the quantity of the stockpile is not large enough to have an effect upon the price level ; (b) if, however, it affects price level downwards, this would adversely affect the farmers' incentives for production ; and (c) the foreign exchange cost of such stockpiling would be a serious burden to the economy. Obviously, all these viewpoints cannot be held at the same breath. If one argues against inflation, then one has to be in favour of large buffer stocks. These stocks would check hoardings, enable the economy to get over short-period emergencies and thus strengthen the potency of the instruments of monetary policy. Even assuming that the major gains out of the price fluctuations accrue to the traders, the buffer stock plan would even out the price level and thus benefit the economy in general. The rural producers, as producers, might stand to lose. But, in the larger interests of the economy, and even of the rural producers in times of distress, (when the producer becomes the consumer), the grain stock proposal would be a big boon. Commodity stock proposals have always all along been welcomed as powerful checks against violent fluctuations in prices.

VII

Let us now examine the monetary implications of the mechanism of payments, receipts and relending associated with the inflow of PL 480 assistance :

(1) When the PL. 480 commodities say worth Rs. 100 crores flow into the economy, the Government of India issues to the RBI Treasury Bills worth Rs. 100 crores. The Government pays Rs. 100 crores to the T.C.M.'s account at the State Bank of India. As the T.C.M..'s deposits are kept as fixed deposits at the State Bank of India, the State Bank's time liabilities go up by Rs. 100 crores.

(2) The State Bank purchases Government securities worth Rs. 100 crores. Let us assume that this represents the contribution of the State Bank to the borrowing programme of the Government of India. The Government's budgetary resources are augmented by Rs. 100 crores. When this is spent, then money supply with the public goes up by at least the same extent.

(3) The Government of India sells the wheat to the public and recovers Rs. 100 crores. The money supply with the public is reduced by Rs. 100 crores. The Treasury Bills of Rs. 100 crores are redeemed.

(4) The T.C.M. makes loans to the Government of India for stipulated programmes. The State Bank of India sells Rs. 100 crores worth of securities to the Reserve Bank of India in order to enable the T.C.M. to fulfil its obligations. The Reserve Bank of India's portfolio of Government securities goes up by Rs. 100 crores. As the Government starts spending the Rs. 100 crores, the money with the public is increased at least by Rs. 100 crores. (If the State Bank had bought the securities from the commercial banks and had to sell them to the R.B.I. later, the expansion in money supply would possible have been larger).

Thus the Government's expendable resources go up first by Rs. 100 crores as a result of the State Bank's investments ; then again, by Rs. 100 crores when the T. C. M. makes the allocations and the State Bank sells the securities to the R.B.I.

From the data contained in Table 5 it is seen that since 1957 the Government's market borrowings have been considerably strengthened by the State Bank's investments in government securities, obviously facilitated by the TCM deposits. It is not possible to conclude that either the size of the budgetary deposits or of the Plan outlay has been influenced by the PL 480 assistance. Nor does one note a *planned*

correlation between the increase in money supply and in P.L. 480 assistance.

TABLE 5

P.L. 480 and Related Data

	1956-57	1957-58	1958-59	(Rs. in Crores) 1959-60
A. Plan outlay	640	846	980	1,092[1]
B. Budgetary Deficits	239	495	147	190[1]
C. Increase in money supply	129	76	109	199
D. Increase in State Bank of India's Time liabilities and in investments in Government securities due to P.L. 480[2] ...	—	98	71	131
E. Absorption of securities by the public[3]	71	113	195	154
F. R.B.I's net support to loan programme[3]	70	—43	32	20
G. Market borrowings by the Central and State governments	141	71	227	174
H. Wholesale price index (52-53=100) ...	105·3	108·4	112·9	117·1
I. Price index of food articles	102·3	106·4	115·2	119·0

1. For 1959-60. 2. Estimated. 3. R.B.I. Bulletin, February 1960.

The effects of P.L. 480 assistance upon the economy can be analysed under different assumptions reflecting the diverse nature of the economic background. These effects would vary depending upon whether such assistance occurs during a year when prices have steeply risen (may be due to shortfall in domestic production), or whether it occurs during a year when domestic production is growing at a normal, expected rate. Again the effects would vary depending upon whether the inflow of P.L. 480 assistance is a once-and-for-all phenomenon or a continuing one. It would be more realistic in India to conduct the analysis on the assumption that P.L. 480 commodity imports would be a normal phenomenon at least for some years to come. In such a case the government's monetary and fiscal policies have to be pursued under the assumption of a certain scale of such assistance year by year. The expectations and responses of farm producers too would tend to be adjusted accordingly. The relevant issue now is to examine the effects of such continuing P.L. 480 assistance on the assumption supplies out of domestic production grow at a normal rate. (The above condition would obtain when the economy has built sufficient stocks to counter shortfalls due to climatic adversities). Let us assume that aggregate money supply, the income velocity of money, and aggregate investment as well as employment remain the same. Under these conditions, P.L. 480 assistance would tend to be dissipated in the form of a rise in the per worker consumption of grains. The Government's investible resources would no doubt be augmented, but this would be countered by reductions in the money

surpluses and profits of farm producers (and private traders). Initially, this would be reflected in an involuntary increase in farmers' and traders' inventories. Gradually, the producers would tend to increase the production of other land-oriented commodities. As the supply of these commodities increases, there would be some effect upon profits and prices in these related sectors. There may be some increase in aggregate investment provided the levels of money wage rates and of interest rates come down. Such an automatic mechanism does not function in India. The Government may make profits or losses upon the food transactions depending upon the rupee prices at which they buy the commodities. (If aggregate money supply, investment etc. remain constant, the prices of commodities would come down and, in all possibility, the government would be making a loss on the transactions).

It is clear, therefore, that except under restrictive assumptions, the continuing inflow of P.L. 480 assistance may tend to be frittered away in the form of a rise in consumption. As the loans would have to be repaid, the Government and the community would have incurred an additional burden without corresponding creation of assets in the economy. Such a policy would be very damaging to the economy's long term interests. Here, in order that P.L.480 assistance is utilised to the best possible extent some increase in investment expenditure (private and/or Government) must occur. Other conditions equal if we assume that the income velocity of money is 5, and that 40% of the increase in incomes is spent upon food, an increase in commodity assistance of Rs. 100 crores per year would require an expansion in money supply of about Rs. 50 crores; for, such an expansion would create conditions for an increase in income and expenditure of Rs. 250 crores. Out of this Rs. 100 crores would be spent upon foodgrains. The supply and demand situation in respect of food would be at an equilibrium and at a higher level of aggregate investment and employment in the economy.[3] In the above, we have tacitly assumed that the economy would possess capacity to increase production of non-food commodities the demand for which would increase when income and expenditure increase as a result of investment outlay. If such capacity does not exist, the increase in income, investment and employment would be obtained under conditions in which prices of non-food commodities would have risen by some extent. This might have some impact upon

[3] The example given in the text is however inexact. The correct picture can be obtained only if we utilise the concept of the consumption-income multiplier, the value of which is the inverse of the marginal propensity to save. For example, if the value of the consumption-income multiplier is 2.5 (the value of the MPS being .6) and if we assume that the outlay on wheat is the outlay on food and that food is the only wage-good, then, an increase in food surplus by Rs. 100 crores creates conditions under which income *and investment* can expand by Rs. 250 crores. On the other hand if the proportion of outlay on non-food consumption goods is the same as that on food (i.e., 40%) then, income will expand by Rs. 250 crores but investment will expand by Rs. 150 crores. The approach in terms of quantity theory does not give us an understanding of the mechanism of income expansion.

the level of money wages. Hence, the exact extent of equilibrium increase in money supply that is necessary when commodity assistance flows as a continuing phenomenon would depend upon (a) the extent of excess capacity in the non-food sectors (b) the effects of price rises in non-food commodities upon the level of money wages (c) the extent of effectiveness of policy measures to hold the level of money wage rates, and (d) the possibility of allocating some portion of investment outlay for expanding the production of non-food commodities and the supply effects of such expansions. It is obvious, however, that to pursue a neutral monetary policy under conditions in which aggregate supply of food is expanding and particularly through loan assistance might prove to be a wasteful policy from the national point of view. Hence, in exact contrast with Prof. Shenoy's view-point, it may be argued that unless some expansion in money supply occurs it is not worthwhile to obtain P.L. 480 assistance through loans.

VIII

Let us now examine the contention as to whether the growth of investment in the economy has been at the cost of a palpably low rate of growth of consumption. Aggregate supply of consumption goods increased at the rate of about 3.5 per cent to 4 per cent during 1951 and 1958. Food supplies have increased at about a rate of 3 to 3.5 per cent per annum. The rate of growth in cotton textiles was substantial during the First Five Year Plan ; the slow rate of growth in the Second Five Year Plan has been largely due to factors on the demand side rather on the supply side. Hence, one cannot argue that there should have been a higher rate of growth of textile capacity than has been the case. Sugar production has grown very rapidly. The major reason for the rise in price of sugar is to be sought in the increased money incomes of the farmers between 1955 and 1959. There has been a shift in the consumption pattern due to growing incomes. There has been a rapid rate of expansion in the production of vegetable oils, availability of passenger transport, paper, kerosene and other essential requirements. No doubt prices have risen ; so too has supply. Part of the reason for the rise in prices is to be sought in the heavy excise duties that have been imposed since the Second Plan; part of the reason is the improvement in the standard of living in a community in which productivity gains in organised sectors are reflected in money wage gains rather than in real wage gains through falling prices. There has been a substantial expansion in the production of consumer durables like bicycles, fans, sewing machines, etc.

The very fact that aggregate consumption has been rising indicates that the monetary over-investment theory does not apply under current conditions in India. Any way, part of the reason for the increase in the demand for, and output of, non-food commodities has to be

sought in the accelerated rate of growth in food production which has obtained since the commencement of the First Plan. To the extent that the U.S. PL 480 supplies augment the rate of growth of availability, they are a welcome factor not merely in the food sector but in other sectors as well ; for, they enable a higher rate of utilisation of capacity in the economy and out of the increased incomes, a higher volume of savings and investment. There is no doubt that the major reason for the increased investment outlays in India since the First Plan is to be sought in the increased availability of food supplies (Absolute and per capita). The increased food surpluses had a multiplier effect upon income in the economy. The increased demand for money emerging on account of the increased rate of availability of food *surplus* is to that extent larger than what is indicated superficially. Hence, the solution for the problem of price stability is a larger expansion in food surplus. Any absolute reduction in food supplies would imply a lower level of economic activity, a lower level of absolute savings and hence a lower rate of growth. To argue that PL 480 should not be given under current conditions in India would be to argue that the rate of growth in India should be slackened from whatever it is and *not* that the level of investment and savings should be reduced. Under current conditions, there could be nothing more damaging to the economy than a reduction in the quantum of foreign aid in the form of wheat and other consumer goods, so badly needed in order to meet the wage-goods gap, arising in the content of rising investment outlays and employment.

We have already noted the factors responsible for the disequilibrium between supply and demand which has caused a rise in prices in India during the last four years. It is interesting to examine the rate at which food supply has been rising and to relate it to the rate at which real income has been rising. The following table gives broad figures in this respect:

TABLE 6

Food Supply, Population and National Income, 1951-58 (1951=100)

	Indices						
	1952	1953	1954	1955	1956	1957	1958
Food[1]	106	122	123	121	124	123	129
Real National Income	104	110	113	115	121	119	127
Population	101·6	103·2	104·9	106·5	108·2	110·3	112·4
Per capita food supply ...	104·4	118·8	118·1	114·5	115·8	112·7	116·6
Per capita real income	102·4	106·8	108·1	108·5	112·8	108·7	114·6

1. Supply in any given year equals average of production of that and the previous year plus imports of that year.

It is difficult to obtain figures regarding marketable surplus. One may guess that the rate of growth of *per capita* food supply would be a broad measure of the changes in the marketable surplus. Real national income and food supply have grown more or less by the same percentage over the period of 8 years. The influence of the harvest boom in food supply in the middle year of the First Plan spent itself out by 1955-56, when the level of prices started rising. *Per capita* food supplies in 1958-59 were less than that in 1953-54; since the commencement of the Second Plan, *per capita* food supply has been increasing only at a painfully slow rate. This is despite the availability of PL 480 aid. One might note that marketable surplus in 1957 must have fallen steeply. In this year, there was a large expansion in investment. During the Second Plan, such expansion has been facilitated by the large foreign aid that has been received. Now, if foreign aid accrues in the form of import of equipments, there is a corresponding increase in the demand for labour. Hence, foreign aid in the form of fixed capital increases the domestic demand for food. Unless this is met somehow, either through increased imports or through increased marketable surplus and/or through a sharing of given food amongst a larger number of people, import of fixed capital will not have fulfilled its purpose. The Government has been meeting the increased demand for food largely through imports of PL 480 and partly through a forced redistribution of a given quantum of food amongst a larger number of employed workers. In order to be logical, Professor Shenoy must argue that larger foreign aid of any form is bad. Why get foreign aid in the form of equipments if it ultimately causes prices to rise? The corollary of this reasoning is that even under conditions where a higher rate of growth is possible and feasible, one must not obtain it!

To pursue the point still further, suppose more capital goods are produced at home. For the time let us visualise the possibility of utilisation of these equipments for augmentation of agricultural capital. But such a policy, in its turn, would imply, because of initial low availability of food, under-utilisation of capacity in the capital goods sector. Suppose there is a possibility that the country can get food aid through PL 480. Should the country deny itself of this opportunity of obtaining a higher rate of growth? If any country adopts such a policy, then not merely will it for ever remain underdeveloped, but also it does not deserve to develop.

Thus, looked at through whatever angle, it is difficult to sustain Professor Shenoy's conclusions through economic logic unles one starts with the premise that under all circumstances, it is better for a country not to make any effort to increase its standard of living even when it is possible and feasible.

IX

Professor Shenoy has been repeatedly pointing out that the quantity of smuggled gold has increased since the commencement of the Second Plan, that the steep rise in domestic gold prices is a clear indication of the loss of public confidence in the value of the rupee and that the increased demand for gold hoarding represents a major shift in the psychology of the public away from other liquid assets towards gold. All these arugements, of course, fit well with Professor Shenoy's general thesis about deficit financing, inflation, monetary policy, the value of the rupee, etc.

TABLE 7

Gold Prices, Commodity Prices and Agricultural Incomes, 1951-59

(1952 = 100)

Year	*Gold Prices*	*General Wholesale Prices*	*Gross Agricultural Incomes*
1951	123·3	122·2	126
1952	100·0	100·0	100
1953	94·0	101·8	110
1954	96·4	97·4	115
1955	103·4	89·4	106
1956	112·7	110·0	122
1957	117·7	106·3	137
1958	121·3	108·6	131
1959	133·1	112·9	157

It may be noted that broadly the index of wholesale prices as well as the index of gold prices have moved together. The index of wholesale prices dropped by about 11 per cent between 1952 and 1955. (The steep drop between 1951 and 1952 is due to the impact of the crash of the Korean Boom and of the vigorous disinflationary policy pursued by the Reserve Bank of India). Gold prices, however, rose by about 3 per cent during the same period. Since 1955, both commodity prices and gold prices have been moving in a similar direction. Between 1952 and 1959, the relative value of gold *vis-a-vis* the rupee has again gone up by about 20 per cent. One can make a broad statement that gold prices and commodity prices have tended to move similarly though since 1955, gold prices have started moving up at a faster rate than commodity prices. Between 1955 and 1958, however, gold prices went up by about 16 per cent; whereas commodity prices went up by about 22 per cent. It is only during 1959 there has been a relatively steeper spurt in gold prices as compared to commodity

prices. It is well-known that some quantities of gold were being smuggled in during the years of the First Plan when gold prices were falling as well as during the Second Plan when gold prices have been rising. Obviously, the propensity to smuggle gold is to some extent independent of the trends in the general price level and in the value of the rupee.

It may be presumed that the demand for gold under Indian conditions is a special case of the demand for liquid assets. The premium placed upon gold *vis-a-vis* currency, bank deposits and other such items is primarily because of the long-established confidence of the public in regard to the easy marketability of gold and the relative stability of gold in terms of commodities. As economic development proceeds and changes are brought about in the pattern and range of savings institutions, people will tend to shift to media other than gold to satisfy the craving for real liquidity. However, the desire for liquidity is one thing; but the ability to divert resources for purchases of liquid assets is another thing. Changes in the ability to buy liquid assets in general are as important in determining the level of gold prices as shifts in preference between one liquid asset and another. Any way, on both these counts, Professor Shenoy's case does not stand a deeper examination of facts. The fall in gold prices during the First Plan was largely due to the fall in the money incomes and money surpluses of rural producers. The crash in agricultural prices following the harvest boom of the First Plan slashed farm incomes and profits, and thus reduced the effective demand for gold as a liquid media. Actually, some quantities of gold must have been dishoarded in the case of producers who were seriously worse off. Similar is the explanation for the steep fall in gold prices between 1951 and 1952. The active deflationary policy pursued by the monetary authorities in conjunction with the crash of the Korean boom cut farm money incomes and surpluses considerably. The Rural Credit Survey data for that year indicates the big drop in cash holdings that occurred in that year and the steep rise in rural debt. During 1955-56, however, prices started recovering and from then onwards, there has been a steep upward trend in prices of agricultural commodities. Even, for example, in 1957-58, when farm output fell drastically due to climatic adversities, the prices had risen and the violent deflation in incomes that took place in the earlier years did not ensue. There is, however, another factor which has become operative during 1959. This is due to the strict efforts undertaken by the Reserve Bank of India to prevent the smuggling of gold. The supply of gold through smuggling must, therefore, have dwindled in 1959. Again, there has also been a downward trend in the domestic production of gold. All these factors certainly had an effect in causing a steep rise in gold prices between 1958 and 1959. The best way to bring about a steep fall in gold prices, if that is what Professor Shenoy desires, is to cause a violent deflation in the econ-

omy and thus bring about deep distress amongst the farming classes. That, in no way, would imply a sudden strengthening of the economy's position for, after all, basic structural changes in the economy have to occur if the overall strength or weakness of a currency is to be changed.

There is also another aspect to the whole story. If Professor Shenoy's general thesis about the effect of excess liquidity upon gold demand is valid, then, obviously, the ratio of personal savings to personal disposable incomes must be falling. The public's demand for liquid assets other than gold must be falling. The following table presents the relevant statistical data in this respect :

TABLE 8

Disposable Personal Income and Personal Savings (1951-52–1958-59)

(*Rs. crores*)

Year	Disposable Personal Income	Personal Savings	Personal Savings as per cent of col. 2	Personal Savings in form of currency and demand deposits
1	2	3	4	5
1951 ...	9,717	327	3·4	−158
1952 ...	9,646	454	4·7	−24
1953 ...	10,350	590	5·7	11
1954 ...	9,441	753	8·0	90
1955 ...	9,767	816	8·3	268
1956 ...	11,053	913	8.2	149
1957 ...	11,118	815	7·9	59
1958 ...	12,369	921	7·5	123

The evidence in the above table does not corroborate Professor Shenoy's fears or 'illusions.' The ratio of Personal Savings to Disposable Income has oscillated at about 8 per cent. Moreover, Personal Savings in the form of changes in money are a small part of savings.

The public's willingness to keep their liquid resources in the form of time and savings deposits, postal deposits and in other forms of small savings, debentures and shares in private companies, life insurance etc. have all been rising. A major reason for the rise in the ratio of personal savings to disposable incomes is the shift away from gold and not towards it.

Another argument of Professor Shenoy is that the foreign aid has been wasted through increased purchases by residents of assets belonging to the foreigners. Factual evidence on this score is difficult to

obtain. If Professor Shenoy is correct, sales of assets belonging to foreigners must have *increased* since the commencement of the Second Plan. In an article on 'Foreign Private Investments in India, 1948-58,' published in the *Journal of the Indian Institute of Bankers* (October, 1959), Mr. S. Kumarasundaram points out on the basis of the data available at the Reserve Bank that between 1948 and 1958, the outgo of foreign capital amounted to Rs. 375 crores. Profit remittances are supposed to have amounted to Rs. 300 crores. The repatriation of capital thus amounts to Rs. 75 crores. On the basis of the balance of payments data, in recent years, the amount of such repatriation must not have exceeded between Rs. 4-5 crores per annum. On the other hand, the available evidence indicates an upward trend in the inflow of foreign private investment in India. The annual average of such investment between 1954 and 1955 amounted to 17.6 crores. In 1956, it amounted to Rs. 36.8 crores and in 1957, to Rs. 48.9 crores. The provisional estimate for 1958 is put at Rs. 27.9 crores. There was no doubt some large-scale repatriation of capital in the immediate years following Independence. But Professor Shenoy has yet to present aggregate evidence in order to show that there has been a large-scale flight of foreign capital from India *and* on account of the alleged lack of long-term confidence in the value of the rupee.

Incidentally, Professor Shenoy refers to the wastage of foreign aid in the form of purchases of luxury articles like watches, clothing, tape-recorders, etc. Aggregate evidence in this respect is lacking. One is not clear whether the quantity of such smuggling has increased during the last two years.

Professor Shenoy seeks to discount the content of foreign aid on the ground that the pool of foreign exchange or domestic resources is a single pool. Unfortunately, this analogy is very inapt. Much of foreign aid is in the form of specific equipments or commodities. Some of the equipments are complementary to domestic supplies. There is no precise meaning that can be attached to the term 'wastage' of foreign aid in this context. The only way this can happen is through the non-use of these equipments or commodities. But this certainly is not what is happening. To argue that diverse equipment or commodity imports are a homogeneous pool is to say that machines, steel, wheat are all the same ! The implication of Professor Shenoy's analogy is worse ! There is no distinction between commodity and commodity and none at all between commodity and money!

X

While it is obvious that the actual performance of the economy during the Second Five Year Plan has proceeded along lines different from what was anticipated by the Planning Commission, it is not true, how-

ever, as Professor Shenoy and others contend, that no substantial progress has at all been achieved in the economy. It must be noted that the ratio of net capital formation in India has risen from between 5-6 per cent in 1951-52 to about 11 per cent in 1958-59. The ratio of domestic savings as percentage of national income has risen from about 4 per cent in the beginning of the First Plan to about 8 per cent. Real national income has gone up between 1951-52 and 1958-59 by about 27 per cent, indicating an arithmetical average of about 4 per cent per annum. Per capita real income has gone up over the same period by about 16 per cent. Reproducible wealth has gone up over the last eight years by nearly 50 per cent. The ratio of increment of net capital formation to total capital has gone up from about 5 per cent in 1951-52 to about 7 per cent in 1958-59. Since the commencement of the Plan, national capital has started rising faster than that at which population is growing. But if we take all forms of wealth, the rate of growth of wealth is about 3 per cent—barely 1 per cent above the rate at which population has been growing. It is only when one keeps in mind the comparative stagnation in per capita incomes witnessed during the 50-year period earlier to Independence, that one can comprehend the big changes that have come about as a result of the national plans. To argue for a small sized long-term Plan and to suggest to the economy to reconcile to itelf a low rate of growth is hardly the pittance of a solution to the socio-economic problems of the country. The challenge of the period is to obtain still higher rates of growth in the context of an atmosphere of relative price ability. Monetary and fiscal policies in the underdeveloped economies must be adjusted in the light of the changes in the basic background of these countries as compared to those of the developed countries. Economic theory and practice must recognise, for example, the crucial significance of changes in food supply in an economy of low nutrition and potentially abundant labour supply.

Bombay P. R. BRAHMANAND

REVIEWS

Economic Development, Problems, Principles and Policies. By Higgins Benjamin. (New York : W. W. Norton & Co., Inc., 1959, pp. 803).

In the rapidly growing literature on economic development as it refers to underdeveloped countries Professor Higgins has produced by far the best textbook. This reviewer is particularly gratified by two aspects of the approach of this book. Being aware of the need to "reconsider... the scope and method of economics" (p.xiii) in the context of the problems of economic development, Higgins defines his subject-matter such as to include among others geographic, sociological, cultural and technological determinants. Secondly, he has not indulged in the widely current but futile attempt to find *the* theory of economic development because "underdeveloped countries exhibit some significant common characteristic, but also some important differences" (p. 25). Unfortunately the author did not succeed in his effort to write a book "intelligible even to people with no previous training in economics" (p. xiv). The book is written on too high a technical level for that purpose. For instance, the author starts to use "gross" incremental output ratios (p. 22) without an adequate discussion of the concepts of capital output ratios. On the negative side also, it is regretable that the early part of the book are the least satisfactory. There is the danger that many readers will never get to the excellent Parts 3 and beyond.

After a general introductory chapter, Higgins includes a chapter of case studies consisting of six countries to which he devotes some 60 pages. Therefore, these sketches become so brief and superficial that it is difficult to know what purpose they serve. In Part 2 Higgins tries to pull out the ideas of economic growth contained in the earlier literature (Classical, Neo-classical, Marx, Schumpeter, Hansen, Harrod). The unique feature of this exercise which otherwise resembles the comparable attempt of Meier and Baldwin, is that Higgins tries to compare the various authors by means of a single model. This results in a considerable number of *tours de force* which the author seems to recognize when he says in talking of the Marxian system, for instance, "we shall have to exercise a bit more *ingenuity* (italics supplied) to close the Marxist system than was necessary for the Classical One" (p. 112). Likewise, while there is always room for disagreement as to who should have been included in such a survey, there is one ommission which must be mentioned. The system of Veblem (or perhaps his present exponent Ayres) is not discussed. This is especially surprising for an author who has recently

joined the faculty of the University of Texas, the present-day citadel of Neo Veblenianism for over two decades.

It is only in Part 3 (Principles : Lessons of History) that the author begins to present some well written and partinent observations. The first chapter in this section presents a summary of the historical theories of economic development (e.g. Tawney, Rostow, etc.), while the second chapter entitled "Economic Development : Past and Present" expresses some shrewd general observations about economic development. Parts 4 and 5 will probably be considered by many the most valuable part of the book. It is here that Higgins surveys the literature of Principles : Theories of Underdevelopment (Part 4) and Policies (Part 5). His discussion generally is lucid and succinct and, as mentioned earlier, covers a broad range of topics. Higgins does not provide *the* grand synthesis. After all he is writing primarily a textbook. Again, one could argue rather fruitlessly whether this or that item should have been included or excluded. Why, for instance, did he omit Kurihara and Viner and the important early effort of A. J. Brown ? A special mention must be made of Higgins' suggestions for research of economists in particular and social scientists in general. By way of illustration Higgins admonishes the anthropologists (and others) "If anthropologists are to be genuinely helpful to the economists seeking to understand the relationship between culture and economic behavior, their scope and method must be substantially changed" (p. 773). A good selected bibliography is included at the end of the book.

While this book cannot substitute for a reading of the original literature, it provides a summary which a student of economic development neglects at his peril.

Bombay HENRY H. SCHLOSS

Inter-Industry Economics. BY CHENERY & CLARK. (New York : John Wiley and Sons, 1959. pp. xvi+346).

INPUT-OUTPUT analysis and linear programming are among the most important branches of Applied Economics. But, there have been very few attempts to relate these two important fields. Combining as it does the input-output approach with elements of Linear Programming this book fills a long felt gap and offers a flexible set of techniques for analysing changes in economic structure and evaluating alternative policies for economic development.

The book is, till now, the only book that provides a unified discussion of inter-industry techniques and their applications. It is a

"MUST" for every one interested in the field of input-output analysis be it as a layman or as a specialist.

The first part gives an intrduction to inter-industry theory. The second part is devoted to applications. All principles are well explained and amply illustrated by means of actual instances taken from experiences in the U.S.A. & Italy. A survey of inter-industry research in various countries has also been given.

Starting with the simplest input-output model the authors present a series of eight models—four in input-output form, four in linear programming form. Of special interest is the revised simplex method presented in chapter 4 Sec. D which (the authors claim) is particularly suited to inter-industry problems. A study of models VI and VII gives us an idea of how complicated and cumbersome the problem becomes if problems of choice (and hence linear and non-linear programming) are introduced into inter-industry models. Model VIII discussed in chapter II Sec. C is an instructive exercise in non-linear programming. The problem is tackled by reducing it to a series of linear programming problems. The solution to a non-linear fourteen equation system was obtained by this method quite readily. However in cases where the introduction of a more detailed breakdown is necessary, the model becomes cumbersome the method of commodity balances, though crude, may be used in preference to the non-linear programming models.

But, this is not to underrate the importance of the methods suggested. The book is a very valuable addition to the literature on inter-industry economics.

G. S. MADDALA

An Introduction to the African Economy. By J. C. DE GRAFT JOHNSON. (Delhi : Delhi School of Economics, 1939, pp. 115, Rs. 7.25).

AN Introduction to the African Economy" consists of four lectures delivered by Dr. J. C. De Graft Johnson at the Delhi School of Economics.

The first lecture deals with "Population Trends and Economic Development." The thin population of the vast continent of Africa is attributed mainly to slave trade which not only led to internecine wars but also swept large numbers of Africans from the continent to America, Europe and some other parts of the world from 1444 to 1890. The author believes that the depopulation led to what he calls

"neutralization of top brains,"—a case in point being the destruction of the University of Sankore and the disappearance of domestic velvet industry of Belgian Congo. This cannot be wholly attributed to the slave trade since many civilizations of West Africa like the Empires of Ghana, Sowghai and Melli were long destroyed by the 15th century.

In modern times, with improvements in health and sanitation, the population is surging upwards. Dr. de Graft-Johnson casts doubts on the current population figures of Africa and points out that the 1955 census contains a wide margin of error. He raises the familiar Malthusian bogey—in population discussions a thing not relevant to present day Africa.

The relationship between population and economic development receives very inadequate treatment. What he says is so general that it hardly gives any insight into the development problems of Africa. However, in later lectures the subject receives some attention.

The second lecture deals with Land Tenure. The general conception is that the ownership of the land is communal, but this has been seriously undermined by European powers in Africa. Lands have been alienated to settlers or foreign companies for plantation purposes. In some places like Uganda, communal ownership was broken up and African landlords were created. The "Ebusa" system in Ghana by which a farmer retains 1/3 of the produce either in money or kind on the land he cultivates but does not own is never mentioned. There may be similar practices or variants of it elsewhere but no light is thrown upon them.

He compares the success of the plantation system of settlers and companies in Africa with the success of peasant cultivation in West Africa. But such important problems as the lack of freedom for African peasants, in East Africa, to grow commercial crops (such as coffee) and to undertake industries such as dairying receive no treatment.

But, he touches on agricultural schemes such as the Gezira scheme in Sudan, the Office du Niger in Niger (French West Africa) and Fonds du Bein Etre Endigene in Belgian Congo. These schemes are meant to help African farmers. The most successful scheme is that of Sudan where the farmers under it receive an average income of £200 a year. Greater details of the working of the schemes would have been more welcome.

The third lecture is on Trade and Industry. Here he outlines some of the difficulties Africans face. The Africans have to contend with foreign monopolies. In West Africa about 85% of the imports

is handled by foreign trading concerns. Under the colonial rule Africans had been prevented from taking part in the external trade through cut throat competition, refusal of banks to give credit to Africans and the development of sole agency systems and conditional sales.

The greater part of foreign investments in Africa goes into the mining industry. The main obstacles to industrialization in Africa are traced to "(a) the unsuitability or inadequacy of basic economic facilities (b) social structure, institutions and social values which are inimical to economic growth (c) the paucity of technical knowledge and (d) limitations imposed by international conditions." In spite of these obstacles there has been considerable progress. The rates of capital formation in some African countries in 1952 are as follows: Nigeria 7%, Ghana 14%, Belgian Congo 27%, Northern Rhodesia 31%, and Southern Rhodesia 45%.

The final lecture deals with "Economic Activity and the State." A brief description is given of developments in Africa. The development in Ghana receives a much more detailed treatment. Most of the development plans in Africa consist mainly of capital works programmes. Lack of technical men often delays and prevents certain phases of the plan from being put into execution. This is particularly so of Ghana's First Development Plan, of which projects valued at £15 million were not executed, although the money was available.

The survey is approached mainly from the historical angle. Although many interesting aspects are inadequately dealt with, the book affords interesting reading to the general reader and to some extent to the student of applied economics. One leaves it only to wish that a bigger volume on African Economy is available to throw more light on many problems raised in the lectures.

Bombay K. N. ONUMAH

A Pilot Survey of Fourteen Villages in U.P. and Punjab. By P. K. Mukherjee and S. C. Gupta. (Bombay: Asia Publishing House, pp. VI+195, Rs. 16.50).

THIS attractively brought out book contains the results of a pilot survey conducted by the Agricultural Economics Research Section of Delhi School of Economics in eight villages of U.P. and six of Punjab in connection with their programme for continuous village surveys. The pilot survey was devised with a view to finalising the schedules and field-procedures for continuous villages surveys and its scope and

content were derived from the objectives of the latter. Continuous village surveys are intended to study the process of change in typical villages having some pre-defined characteristics like big, medium or small size, nearness to urban centre etc. They will take the form of comprehensive surveys of selected villages at intervals of five years. Data yielded by them are expected to be of qualitative character which may be of use in providing a framework of reference and analysis for findings of large-scale sample surveys, which, by their very nature, are selective and restrictive in the categories studied.

The pilot survey has collected data at three levels. Data for the village as a whole from village officials and records' data relating to occupations, land-holdings and land-utilisation from all households, and data relating to stocks, financial assets and liabilities, production and current economic transactions from about twenty households per village representing the cross-section of occupations. These data were intended to provide the main contours and directions of economic change, especially changes in occupational pattern, distribution of land and degree of openness and monetisation of economic transactions.

In presenting the data, the authors have adopted the relatively unhelpful procedure of combining in a table all the selected villages in a region. This has sometimes given rise to unwieldy tables like the one on page 70 which includes within itself composition of purchases of food commodities according to location, source and mode of purchase in eight villages. The procedure has also resulted in recounting variations among villages, the significance of which remains unexplained. As villages were selected for detailed case studies, it would have been more appropriate to present individual studies of villages and relate field-findings to their typical characteristics. As it is, the latter aspect is relegated to a position of cursory interest dealt with through casual observations. The authors themselves seem to be aware of this as they obeserve at the outset in the last chapter: during the process of analysis of data, we were unable, in many cases, to explain the different types of variations and exceptions in the absence of a predominant economic characteristic of the village under study for gauging the process of change." This reads strangely with the statement in the introductory Chapter that the selected villages had "different characteristics of their own of which special study was sought to be made."

Some weak points in formulation of hypotheses and analysis of data need to be mentioned. The statement on page 20 regarding occupational diversification towards non-agricultural occupations reads very much like a tautology and the preceding explanation, with the best of efforts to interprete it, remains a riddle. While the degree of

openness' of village transactions is regarded as an indicator of progress, the authors appear in places to assign a contrary meaning to increasing 'openness' for example in them, references to purchase of implements. As regeards occupational data, the omission of occupational distribution of individuals and ambiguity regarding the basis for divison of occupations into main and subsidiary are difficult to explain, the latter particularly so, since figures of income and employment appear to have been obtained through schedules. The purpose of repeating fables reating to occupations and land-holdings at the level of selected households is not readily evident. In some places comments on live stock, implements and buildings look forlorn without the detailed tables anywhere in sight. As regards purchases, it would be worthwhile to extend the analysis to include a separate treatment of non-food items and cross-analysis of purchases according to location, source and mode,

While the analytical part of the survey, inspite of some blemishes noted above, makes useful reading, the utility of the book as a pilot survey is severely limited by the perfunctory treatment of several methodological issues of importance. This is particularly surprising since, both the foreword and the introduction stress the fact that the survey was intended not so much to obtain firm data as to test schedules and clarify concepts and procedures. One of the objectives is stated to be determining levels of accuracy of data relating to different categories. But the last chapter, which is supposed to contain findings of the survey on these aspects, adheres scrupulously to the well-trodden path of generalities. There are tantalising references in the earlier chapters to modifications in schedules in the light of experience in field. Yet the last chapter has just this to say about these modifications: "The nature of these changes consisted of rearrangement of questions of columns, alternations in the actual questions, additions or deletions of blocks or items in the blocks and changes in the period for which various types of data were to be recorded." The Chapter on assets and liabilities complains about the general unreliability of figures but says nothing about attempts made, if any, for providing cross-checks and for estimating margins of error. Same veil of silence shrouds the information collected on ability and willingness of informants, which might have provided helpful guidance on these points. The only concrete points of interest emerging from the concluding Chapter seem to be the decisions to select villages individually rather than in clusters and to extend intensive enquiry to all the households in the selected villages. The unusual reticence of authors on such importont issues has robbed the book of much of its value as a pilot survey.

Bombay V. M. RAO

Trends in International Trade: A Report by a Panel of Experts, [PROFESSOR G. HABERLER (Chairman), DR. ROBERTO DE OLIVEIRA CAMPOS, PROFESSOR J. E. MEADE, DR. J. TINBERGEN] (GATT, Geneva: October 1958, pp. 138, $2/-).

THIS panel of four persons "who are internationally recognised as experts in the field of international trade and finance" (p. 1) was invited by the contracting parties to the GATT to examine the past and current trends in international trade and their implications in the context of the discussion at the twelfth session of the GATT in 1957. In view of the concern, expressed by a considerable number of Trade Ministers, at "the failure of the trade of less developed countries to develop as rapidly as that of industrialised countries, excessive short-term fluctuations in prices of primary products, and widespread resort to agricultural protection," the panel was to examine also the "medium-term prospects for international trade in the light of the facts and trends" (p. 1) as it saw them. The document prepared is an indispensable reading for any student of international economic problems.

Apart from the Summary of Conclusions, the report contains three chapters dealing with facts and their interpretation, an assessment of the future import requirements and of the prospects for exports of primary producing countries, and the effects of policies for stabilisation and protection upon future prospects.

Both the short-term fluctuations and long-term changes in the international trade pattern are analysed. A survey of the world exports of primary goods and of manufactured goods suggests that the amplitude of price fluctuations, both in primary and manufactured goods, has been smaller since the war than in the 1930's (p. 13), but "whereas the volume and price changes of manufactured goods have on the whole been of the same magnitude, the prices of primary products have fluctuated more widely than their volume." (p. 15) This semblance of greater post-war stability in prices conceals, however, a number of divergent changes affecting individual commodities and thus overshadows a real and often acute distress to primary-producing countries who in most cases supply only a limited number of commodities to the world market.

As regards the factors responsible for these fluctuations, the panel has little to add to what is well-known. The cyclical fluctuations, incidental or non-economic disturbances, crop yield variations and gestation cycles and the movements induced by each of the four types of factors are discussed in relation to the short-term instability in the export proceeds of the industrial countries.

So far as the long-term trends are concerned, the general pattern of world trade, i.e., the relative share of non-industrial and industrial countries in the world exports, has become roughly similar to the

pattern in 1928 The increase in the world exports by 58 per cent was, however, less than the over 100 per cent increase in the production of commodities. At the same time the commodity composition of exports has become "fundamentally different." A striking increase in the exports of petroleum accounts for more than half of the increase, between 1938 and 1955, of exports from non-industrial countries. Probing into the gains of different countries, the experts note that the proceeds of "eight large and rapidly industrialising countries." (Argentina, Brazil, Mexico, India—including Pakistan, Union of South Africa, Finland and Yugoslavia) rose more slowly than for the other non-industrial countries. Even among the latter, those with "sheltered" markets enlarged their proceeds from exports more than those without such benefits (pp. 24 and 25). A more rapid increase in the imports of these countries naturally led, except in petroleum exporting countries, to balance of payments problems which were responsible for a decline in the share of semi-industrialised countries in the world reserves (outside of international institutions) from 12 to 7.5 per cent between 1950 and 1957 (p. 36). The relatively slow recovery, in the post-war period, of private foreign investment has been more than made up by the emergence of official long-term loans and grants as a new important source of funds adding to the capacity of non-industrial countries to import.

How useful is the grouping together of eight countries as "semi-industrialised" countries? The following table gives data relating to the population employed in the primary sector and the *per capita* national income. To group together such a heterogeneous group of countries whose problems differ to a great extent would require some special justification; but one looks in vain for any discussion of this classification. Perhaps this was done arbitrarily and out of pressure to encompass the large number of countries within manageable categories.

Country	Census Year	Percentage of economically[1] active population employed in agriculture, forestry, hunting, fishing, mining and quarrying	Per capita[2] national income (in dollars) for 1957 unless otherwise noted
Argentina	1947	25·66	—[3]
Brazil	1950	60·58	—
Mexico	1950	58·97	234/-
Finland	1950	46·26	648/-
Yugoslavia	1953	68·42	339/-
India-Pakistan	1951	58·30	(1956) 60/-
Australia	1954	15·00	1,075/-
Union of South Africa ...	1946	56·56	347/-

[1] Source: "*Demographic Yearbook* 1956," U.N., Table 12, pp. 344-387.

[2] Calculated from *The Monthly Bulletin of Statistics*, September, 1959, Table 50, Table 1, and Table 51. The complex problem of calculating the real income for each of these countries must be mentioned without any attempt at its solution.

[3] Not computed because of fluctuating exchange rates.

The question as to why the exports of these semi-industrialized countries and of other non-industrialised countries have failed to expand is of great importance. On page 29 we are told that from 1953 to 1957 the share of semi-industrialised countries in the world trade fell from 12 to 9 per cent. Earlier, on pp. 24-26, we have been comforted that the " tendency for the export proceeds of the semi-industrialised countries taken as a whole to rise more slowly than is the case for the other non-industrialised countries " is not " necessarily due to industrialisation policies as such, but to certain forms of such policies which carry with them an anti-export bias." Perhaps the terms of reference requesting the panel " not to include in its report any judgement on the policies of individual countries " are responsible for this vagueness. But a valuable opportunity of clarifying the true position has perhaps been lost. The experts mention on p. 42 and p. 45 the possibility of " the *protection* of manufacturing industry in non-industrial countries " having " diverted resources from primary production." (Emphasis in the original). But there is a more likely event that could have had the same impact. In view of the instability of export prices, and more because of the pressure of growing population on land and lack of adequate scope for expansion of employment opportunities, non-industrial countries are induced to concentrate, in the early stages of their industrialisation, on using the exported raw materials in manufacturing industry at home. A preference for exporting processed and manufactured raw materials or manufactured commodities has been well-known. Also, the rapid growth of population in underdeveloped countries tends to divert exportable surplus to domestic consumption. These two factors frequently coincide ; but even without such coincidence, the first factor is of considerable importance. These two factors should have been included in the analysis on pp.42-45 where the effects of structural changes, protection and shifts in costs on supply of exports are considered.

The authors consider how the factors mentioned above, the low income elasticity of demand and technological changes lowering the input of natural raw materials in industrial output would affect the demand of developed countries for primary commodities, and conclude that " prospects for exports of non-industrial countries are very sensitive to internal policies in the industrial countries, and that on balance their development will probably fall short of the increase in world trade as a whole " (p. 54). In view of the trend of imports of non-industrial countries to grow faster than world trade and their aspirations for economic development, the need to make an " important effort " for a substantial level of capital transfer is emphasised (p. 51). This issue is not discussed in much detail but an interesting and potentially useful index of " aid per caput " has been employed to assess the contribution of official grants and long-term loans to the financing of the post-war import surplus of non industrial countries (p. 33).

The discussion of effects of stabilisation and protection policies of industrial countries on the export earnings of underdeveloped countries is quite detailed and extremely interesting. The experts note the role played by new fiscal devices like the "built-in stabilisers" in preventing deflationary spirals but advise that the authorities of the industrial countries concerned should act "even more promptly" not only in their own interests but also those of the less developed countries. The suggestion made by the late Professor Nurkse[1] that less developed countries could operate national buffer funds, built through "*general* taxation" of the profits of larger exports in prosperity years and to be used to subsidise the exporters in depression years, has been mentioned without any comment. (Emphasis in the original) It may be pointed out that the temptation to use higher proceeds from taxes during periods of boom for developmental purposes may be moderated by the fact that prices of capital goods which the underdeveloped countries seek to import would normally rise when boom raises the prices of primary products (depending of course, on the country supplying capital goods and the factors responsible for rise in prices), and the less developed countries might find it advantageous to wait until the conditions return to normalcy. If, however, it is expected that prices of capital goods are unlikely to revert to the older level, this argument would have no validity.

The recommendation of the panel regarding increasing international liquidity has already been acted upon by the IMF and needs no elaboration.

The discussion on the stabilisation policy that might be operated through an international or closely co-operating national buffer stocks or buffer funds is well-reasoned and the relevant problems have been dealt with in considerable detail. Turning to the discussion of agricultural protectionism in industrial countries, the experts state that "in principle the best way of measuring the degree of total protection given to any line of agricultural production in any country by the combination of protective devices used in that country would be to measure the percentage by which the price (including any subsidy) received by the domestic producer exceeded the price at which the product was available from foreign suppliers or could be sold to foreign consumers" (p. 83). Four difficulties that limit the use of this measure have been mentioned. While this is a useful index and probably the best we can use in the present situation, it must be observed that "the price at which the product was available from foreign suppliers or could be sold to foreign consumers" would be different in the absence of protection. Removal of protection would change the

1. "Trade fluctuations and Buffer Policies of Low-Income countries" in *Kyklos, International Review for Social Science*, Vol. XI, 1958, p. 141 et ss.

supply and/or demand situation and may also change the incomes of the producers. Further, a reallocation of productive resources may also be expected to occur. Thus, theoretically, the measure suggested by the panel is a compromise with the exigencies of the actual world.

Attention has been drawn to what the experts call, somewhat hesitatingly, "a certain degree of anti-protection to agriculture" in Australia, Argentina, West Africa and India. With respect to India it has been observed that "the price of wheat and so the reward offered to domestic wheat producers has been controlled at so *low* a price that even the imports of United States wheat provided under special surplus disposal arrangements have had to be subsidised in the Indian market to bring the price down to the low level earned by the domestic producer." (p. 83) (Emphasis in the original). This is something that the Indian agricultural economists and the formulators of agricultural price policy should examine in detail. A few comments here may be in order. The Indian case illustrates structural changes affecting the supply of primary products. The exports of wheat from India in the early decades of the twentieth century were naturally due to her comparative advantage in the world market. Indian prices must have been lower than those of other countries. If during the war and postwar years, the impact of inflation on prices of wheat has been the same in India and in foreign countries, Indian Prices are likely to be in the same relative position as in early years. The diversion of exportable supplies to domestic consumption of a growing population has not been adequate to meet the increasing requirements and imports have become necessary. Given this situation, the effects of bringing Indian prices in line with the world price need to be scrutinised. In the short-run, a higher price of wheat may affect the cost of living and the wage-cost structure depending on the importance of wheat in the consumption pattern, and may even affect exports of some commodities. But in the long-run, supply may be elastic and imports of wheat may become unnecesary. How and when the adjustment would be most desirable cannot be judged without most detailed and careful investigation. But there is reason to believe that the anomalous situation needs some attention and the authors of the report have done well to draw attention to the countries concerned.

To conclude, the report is a remarkably lucid and important document. Observations on the revenue duties and on the effects of EEC and the association of the overseas territories with the EEC are convincing. There is no doubt that this study is well worth the investment of time for an understanding of some of the most complex problems of international economic policies.

Princeton PRAVIN VISARIA

Economic Surveys in Underdeveloped Countries—A study in Methodology. By P. K. MUKERJEE. (Bombay : Asia Publishing House, 1959, xii + 263).

EVERY serious student of Indian economics is confronted, at the moment, with the inadequacy of the economic concepts, most of which are evolved in the context of developed economies. These inadequacies are more apparent to the field workers who have to collect data and fit them in suitable conceptual categories for meaningful analysis and interpretation. Dr. Mukherjee, now a known name in agricultural economics research in India, has made a welcome beginning in putting forward a scheme of field survey for collection of suitable data under relevant concepts, which could be used for more realistic policy formulation.

The bulk of the work is not concerned so much with the methodology of economic surveys in underdeveloped countries—though the subtitle " A Study in Methodology " clearly anticipated that—as with the theoretical formulations of various aspects of backward economies and specially those which can be quantitatively verified by the survey method.

The author seems to start with two basic assumptions. One, that the type of economy he has to deal with, specifically Indian economy, is composed of innumerable ' close ' and ' vulnerable ' units which are held together by a very tenuous bond. Second, that the *sine qua non* of development is that these bonds should be strengthened, that units should become ' open ' and the economy should be more integrated. Had these been used as premises in a speculative model, one could have accepted the first assumption with some reservation and the second with some modification. But if they are to be used as "given" basis for the actual field work one would have to look deeper into them.

The author has characterised a ' close ' economy by following symptoms : " (a) a large proportion of consumption of local products, " local " denoting the particular economic region that we are studying (b) a very low proportion of transaction between this economy and the " rest of the world," and lastly, (c) a very large proportion of transactions in barter even when buying the local product " (p. 43). Two questions can be posed at this stage. One, what would be the size of this region ? And two, are the conditions mentioned above enduring ?

Following a large number of students of Indian economy Dr. Mukherji is inclined to take the village as a replica of a ' close ' economy. After a hair-splitting discussion of ' closedness ' ' self-suffi-

ciency" and "subsistence," which does not make the reader any wiser, he equates a close economy with a self-sufficient economy operating at a low level. By this formulation Dr. Mukherji has not progressed a bit more than many earlier students of Indian economics to whom he had made references with righteous indignation. He slips into the same pit-fall because he has chosen to ignore the abundant literature coming forth recently from official and non-official sources on varied aspects of Indian village life. This is the literature which trained economists, sociologists, anthropologists and administrators have produced with the most advanced tools of social research. Had he cared to look into this literature his treatment of Rural Economic Surveys (Chap. 2) would not have been so casual and sketchy. In fact this is one common failing of the book that its sources, both factual and analytical, are out of date. To take an extreme example, in order to know the number of implements in rural areas the author has to quote the 1940 livestock census ! His main sources for national income data are not National Income Enquiry Committee Report relating to the years 1948-49 to 1950-51 or the annual estimates of national income (latest of which relates to year 1957-58) but the estimates of Colin Clark (1923-24) V. K. R. V. Rao (1931-32) and Bombay Plan (1931). Such examples can be multiplied.

Even if we agree that our villages represent by and large innumerable 'closed' economies, is this situation enduring ? If with the impact of the developmental forces this 'closedness' is withering away, the type of information to be collected and the research done as suggested by the author would be costly if not wasteful. In such a situation the problem is to identify those stimuli to which the village economies respond with the least resistance and then to adjudge the nature of these responses. The author is aware of this problem, but due to his pre-occupation with building the new conceptual framework he has treated this specific problem in a summary fashion. In the task of clarifying the concepts and facilitating their measurability, the author has not progressed much further than most of his contemporaries.

The book is readable, though one jarring feature is the anticipation of subsequent discussion at a number of places. While noting the shortcomings of the book one should never lose sight of the fact that the author has all the disadvantages of an 'early start'. His is one of few scientific attempts to approximate to the economic reality in India and to translate it in measurable categories.

Anand V. S. VYAS

NOTES

*The Trend in World Economic Disparity**

SOLID empirical evidence to support the suggestion of growing economic disparities among nations is hard to come by. Recently Simon Kuznets[1] made a legitimate speculation that per capita income in the underdeveloped world could not have grown much over the last half century or so, since this would imply incomes too low at the beginning of the century to allow populations to survive. He has also assembled some long series to show that the growth in *per capita* income was almost negligible in two or three underdeveloped countries for which historical data was available. More information can be had now which may be used to verify generalizations regarding post-war tendencies towards the intensification of international economic disparities.

Attempt has been made here to show the differences in the rate of growth in real gross national product *per capita between* industrial countries and underdeveloped countries for the period 1950 to 1957. Various national product series (expressed in national currencies) are published by the United Nations for almost all the developed countries and for many underdeveloped countries. In several cases data for real national product are also shown. Such information is called here for 42 underdeveloped countries. In cases where only the current price figures are shown, the official cost of living index was used as a deflator. In a very few cases estimates had to be made for a year or two on the basis of related series available in national sources. Each one of the series was then converted into 1957 dollars by using the GNP estimates made by the Office of Statistics and Reports of the International Co-operation Administatrion. Many of the county data are compiled in accordance with the UN system of national accounts by the ICA field missions and converted into US dollars at the official rate of exchange without attempting to adjust figures for purchasing power differentials. By expressing all our country data in GNP in 1957 dollars, we are able to achieve some uniformity. Apart from different national currencies, not all the countries for which data is published by the UN are the *gross national product* figures shown.

* The views expressed in this note are author's own ; they are not intended to reflect those of the United Nations where he is a staff member. I am grateful to Dr. Hans Singer for his useful comments during the preparation of this note.

1. Kuznets, Simon, "Quantitative Aspects of the Economic Growth of Nations —I Levels and Variability of Rates of Growth," *Economic Development and Cultural Change*, October 1956, pp. 16-20. Among others, Gunnar Myrdal has made us aware, more than ever before, of the " trend towards greater world inequality " ; this has, however, been challenged by Peter Bauer in *The Economic Journal*, March 1959, pp. 108-109.

This is undoubtedly a patch-work procedure and objection may be raised on several grounds ; therefore, a point or two may be clarified here. The ideal way to express national currencies in terms of one unit would be to find the relative purchasing power of these currencies. Conversion by official exchange rates distorts international comparisons of levels of national product—over-estimating the difference. However, this deficiency is much less important in our case, since we are concerned with rates of growth and change in the differential over time. This is so because the choice of the conversion factor only affects the relative weights ascribed to individual countries in arriving at the aggregate.

As regards the industrial countries, a similar procedure as described above was used for Japan. For Europe, we have taken the OEEC series of member countries combined, in billions of 1954 dollars, the base being shifted to 1957. Data for US and Canada were obtained from national sources. No attempt was made to secure estimates for the Soviet area. Australia and New Zealand were omitted because of ambiguity of classification as well as for difficulties in obtaining real GNP series.

Table 1 shows real GNP for the industrial countries and the underdeveloped countries for the period 1950-1957 together with population and per capita GNP in these two large areas. If we compare percentage increases between the terminal years 1950 and 1957 it will be noticed that total GNP in underdeveloped countries has grown almost as fast as in the industrial countries, but, since population increased more rapidly in the former, the growth in *per capita* GNP has been substantially slower in the underdeveloped countries.

Because of fluctuations in output it would be more meaningful to calculate average annual rates of growth by the method of least squares applied to logarithm instead of comparing the first and the last years of the relatively short period that we have covered. We see from the following tabulation that GNP in underdeveloped countries has grown by 4.1 percent per annum which is a shade higher than the growth rate recorded for the industrial countries.

	Real Gross National Product	Per capita Real Gross National Product
	(Percentage rate of growth per annum, 1950-57)	
Industrial countries	3.98	2.70
Underdeveloped countries	4.14	2.38

More significant are the figures for per capita GNP. While the rate of growth in industrial countries was 2.7 percent per annum a similar

rate for the underdeveloped countries was only 2.39. This has resulted in a slight increase in world income disparity between 1950 and 1957.

Invariably our eyes turn to the future in spite of our awareness of the many pitfalls of projections. If we assume the present rates of growth in total product to prevail for the next thirteen years then what rough order of magnitude will the world economic disparity take? First, trends in GNP were extrapolated to 1970 by the equations used in computing rates of growth. Next, with the help of United Nations population projections per capita GNP in 1970 was estimated for the two areas. These computed values, shown in Table 1, should be construed as illustrations of trends given different growth rates; they do not constitute forecasts of likely magnitudes. Such estimated value of per capita GNP in industrial countries is 2005 dollars (in 1957 prices) which is 12.3 times the per capita GNP for the underdeveloped countries. In 1957 the disparity between the two areas was 10.8 times. The projected growth of GNP for the industrial countries assumes a rate of 4 per cent per annum. If this rate is regarded as unlikely the reader can examine for himself that even with a rate of 3.5 per cent the reduction in world economic disparities cannot be realized in the future unless there is a substantial acceleration in the rate of growth of underdeveloped countries to offset differential population growth.

New York City — ABDUL G. KHAN

TABLE I

Gross National Product and Population, 1951-57 and Projections to 1970

	Industrial Countries			*Underdeveloped Countries*		
	GNP in billions of 1957 dollars	GNP per capita in 1957 dollars	Poulation (millions)	GNP in billions of 1957 dollars	GNP per capita in 1957 dollars	Population (millions)
1950 ...	579·1	1113·5	520·1	89·4	107·2	834·0
1951 ...	619·2	1175·7	526·7	92·8	109·3	848·6
1952 ...	639·9	1190·9	533·3	96·8	112·1	863·7
1953 ...	671·1	1243·5	539·7	102·5	116·6	878·5
1954 ...	672·9	1230·8	546·7	107·3	120·2	893·0
1955 ...	722·8	1306·0	553·4	110·8	121·9	908·7
1956 ...	754·7	1346·9	560·3	114·6	124·1	923·9
1957 ...	763·6	1345·4	567·5	117·4	124·9	840·4
1970§ ... (projections)	1289·4	2005·3	643·0	202·4	163·2	1240·0

§ Based on fitted linear trend to logarithms of original data by the method of least square covering 1950-57, Per capita figures are derived with the help of UN population projections.

Sources :

United Nations, *Yearbook of National Accounts*, 1957 *and* 1958, New York 1958 and 1959 and national sources mentioned therein.

United Nations, *Demographic Yearbook* 1958, New York, 1959.

United States Economy and the National Security Program, Dept. of State, Washington, D.C. April 1959, Tale F6, pp. 59-60.

United States Department of Commerce, *US Income and Output*, 1959, pp. 25-26.
OEEC, *General Statistics*, Jan. 1959, p. 104.

United Nations, *The Future Growth of World Population*, New York 1958, Appendix C, Table II.

A Note on the Indian Railway Statistics

IN the development of scientific thought, the relationship between statistical data and theoretical formulations has been one of intimate interdependence. While the availability of reliable and adequate statistics has laid open vast vistas for theoretical deductions and provided a testing ground for existing theoretical systems, new explorations in the theoretical realm based on logical and abstract reasoning have called forth efforts at collecting the required type of data. The importance of orienting the statistical data thus to requirements becomes all the more clear when a country experimenting with planned development seeks to formulate its policies on the basis of the exigencies of the existing situation and wishes to study empirically the effects of such policies as it might adopt.

The state of statistics in India, despite efforts at speedy improvement, is none too comfortable. Many empirical aspects of the economy remain yet unexplored and much of what has been already done remains to be reshaped to suit the purposes of planning. The railways in India form one of the sectors for which a good amount of data is collected and published regularly. A mass of data relating to Indian Railways appears in the annual publication of the Railway Board: "Report of the Railway Board on Indian Railways Vols. I and II." The railways enjoy this relatively favourable position in the matter of statistical data, thanks to their continued association with the Government, their more or less unified management and organization on the large-scale; and also perhaps due to their vantage position as a revenue-earner for the Government in the past. The statistics that is collected, however, as a matter of administrative routine or from the viewpoint of the financial management or in the interests of preserving historical continuity is not best suited for the purposes of efficient planning. I have attempted to indicate here some lacunæ in the present set-up of statistical data relating to the Indian railways and probable lines on which they could be improved.

One of the important problems that an economy in its upward course of rapid economic growth generally encounters is that of transport bottlenecks. The acceleration of economic activity with the consequent increased freight traffic of both raw materials and finished products, coupled with the elongation of hauls imposes a heavy strain on transport services. In this country, too, there have been talks regarding bottlenecks hampering economic activity. The most significant basis for conscious policy directions to overcome the bottlenecks would be the knowledge regarding the exact location, extent and the nature of the bottleneck. *Where* exactly is the bottleneck situated on the network of railways ? This question becomes all the more pertinent since we know that economic activity is not evenly diffused throughout this country with the resultant large disparities in the density of traffic over the various portions of the extensive network of our railways. Whereas this question could be answered at least tentatively on the basis of commonsense conjecture, the problem of the exact *extent* of the bottleneck needs a statistical assessment of the situation. The extent of the bottleneck would indicate the appropriate remedial measures. If the backlogs of unshipped freight are not of a heavy order, temporary measures like allotting more rolling stock to that particular portion of the network might alleviate the shortage situation. If, on the other hand, the bottleneck is persistent and is reflected in heavy arrears of freight, the live capacity of the route will itself have to be improved. Of course, the engineering staff concerned might have a dependable estimate regarding the situation but no information is available to independent researchers. The *nature* of the bottleneck is of equal importance. Is the deficient supply of freight services a temporary phenomenon arising out of certain temporary difficulties in operation or is it persistent and long-standing ? How has it affected the flows of the various commodities ? The commodity-wise analysis is important both for immediate policy decisions as well as for studying the repercussions of the bottleneck situation on the pace of economic activity. Since the various commodities entering traffic might require different types of wagons, the situation might reflect either a deficiency in particular type of carrying capacity (and hence might require a different type of remedial measures) or a general overall deficiency. Moreover, from the viewpoint of analysing the probable effects of the situation as also of allotting priorities to traffic of particular commodities in the case of a general deficiency, satistics indicating what type of commodities are affected to what extent is essential. If the shipments of basic inputs are affected, the rate of growth of the economy will itself be retarded. In the transportation history of a number of countries, a comfortable freight traffic situation succeeded a severe bottleneck condition, reflecting partly the effect of remedial measures and partly—and more predominantly—the slowing down of the tempo of industrial growth, effected by the preceding transport difficulties. The bottleneck aspect, therefore, needs a more comprehensive statistical scrutiny.

Such data as were collected relating to the location, the extent and the nature of unshipped freight in the U.S.S.R. were used profitably for speeding up the recovery from the transportation crisis of the thirties.

Another important aspect of railway statistics, which seems to have not received as much attention as it deserves, is that relating to the length of haul of various commodities. The Railway Report does give the overall length of haul of freight traffic and also those of a very few commodities, namely, coal, grains and oilseeds. The tonnage data (and not in ton-miles) alone is presented for other important commodities. Space is an important dimension of development; more so, in a country of the geographical expanse as that of India. It would be not only interesting but also helpful to planning, to study the spatial dispersion of economic activity through the analysis of the lengths of haul of important commodities. Apart from this, such statistics would also give an insight into inter-carrier relationships and the effect of the development of road transport on railways. The growth of inter-carrier competition in the advanced countries has been reflected markedly in the lengthening of the average length of haul of commodities (especially like grain, agricultural and forest products) on the railways. This type of a study though not very significant immediately might attain importance in future.

New statistical and mathematical tools have been developed in the countries of the West and the centrally planned countries, which have given promising results in efficient planning of transportation services. Statistics suitable for the application of such techniques needs to be developed. To instance: The linear programming model of transportation developed by theorists like F. L. Hitchcock, G. B. Dantzig and T. C. Koopmans yielded very good results when applied to the routing of fleet during the war. The problem was to short-route the ships, given their fixed destinations so as to involve minimum of equipment-time. Such a technique as this is immensely useful in planning for the optimum utilization of transport capacity. Railways, as is well-known, are highly capital-demanding in nature. There are, however, possibilities of intensive utilization of a given railway capacity and of reaping increasing returns thereby. Planning of efficient utilisation of transport capacity, therefore, is of crucial significance. The territorial expanse of this country together with uneven development of regions has resulted in unbalanced traffic on Indian Railways. Situations arise, as a result, of heavy strain on certain routes with empty haulings on others. The routing of these empties in order to provide adequately for requirements on all the routes and at minimum cost (in terms of equipment time, i.e. distance travelled by a single equipment unit, say a wagon) should receive the attention of the administrators. The supporting statistics relating to the arrival of empties and

demand for them at important terminals, failing which the tons originating and the tons terminating of important commodities at important terminals needs to be build up. Such 'flow and programme data,' as it is called in technical parlance, together with the commodity-wise carrying capacity of various types of wagons will indicate the supply of and the demand for and carrying capacity at important terminals, and thus help the policy-makers to draw inferences regarding the 'surplus' (i.e. more availability of empties than the demand for them) or the 'deficit' situation at the terminals and plan the routings accordingly.

No doubt, the Railway Report does present a mass of useful statistical data. However, more data could be profitably incorporated and, since the railways enjoy the advantage of a unified management and large-scale operations, the collection of such data and beneficial use of them in actual policy-formulations is afforded much wider scope than in the case of many other sectors of the economy where production is diffused and decision-making limited.

Bombay K. M. CHANDAWARKAR.

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